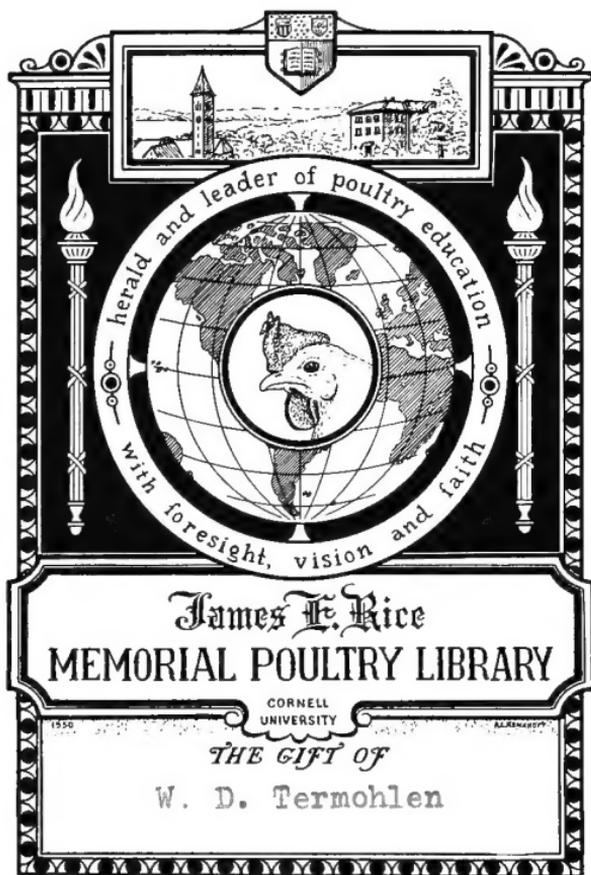


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2

THE TRUTH ABOUT
THE
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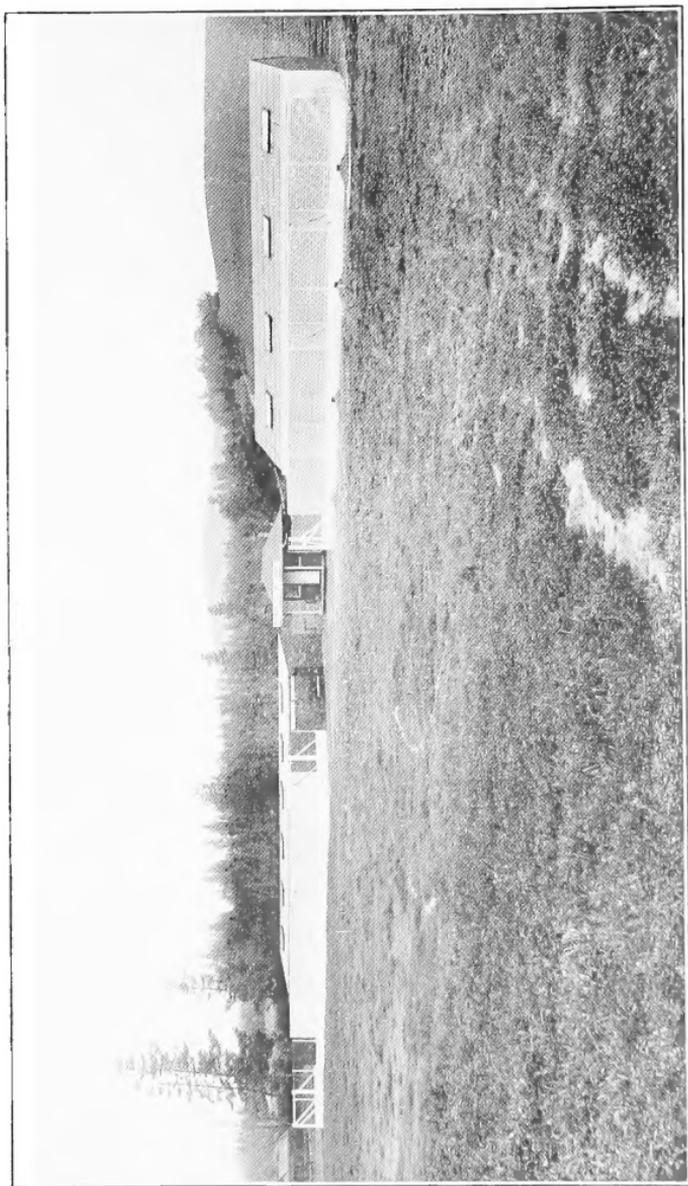
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Conboie's Roup-Proof Poultry System. (patent pending), showing laying house, brooder house and incubator and feed house. This farm is located in San Mateo.

**THE TRUTH ABOUT
THE
POULTRY BUSINESS**

By
CONBOIE, Joseph A



**PUBLISHED BY THE AUTHOR
San Francisco**

1914

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by

CONBOIE

INTRODUCTION

A short time ago I started to prepare a description of my World's Best Poultry System. I had no idea of writing a book, but as I looked around me and saw the miserable condition of the poultry business, I found it impossible to produce a catalogue in which this business should be praised to the skies, and although I write this book at the expense of my poultry system, I believe there is a greater need for a book of this sort than there is for any poultry system.

If a corporation owned my system and issued an elaborate circular I believe it would realize very large sales, because I am confident that my system is the biggest thing that has ever been brought before the poultry men. Instead, however, of putting my little capital into a fancy catalogue telling the public of the millions that are to be made in the poultry business by using my system, I am putting that capital into this book, in which the other side of the poultry business is revealed.

By doing so I may keep some people out of the business and lose some customers for my system. This is not a usual proceeding. I have been told that it will mean ruin to me in a business way, but if this book falls into the hands of some one and prevents him or her from losing the savings of a lifetime by entering the poultry business with insufficient knowledge of the risks it entails, I shall feel more than repaid for any financial loss that I may suffer.

I do not measure success by a money standard; to me there is something higher than that. I believe this book will do more good than any book that has ever been published

about the poultry business, and if it should cause a general awakening among the poultry men it will do a good which can never be measured by money.

My objects in writing this book are: (1) To prevent people with savings that have taken them a lifetime to acquire from investing them in the poultry business under the delusion that they will get rich quickly, and to save them from that rude awakening which comes with the vanishing of their capital. (2) To show those who are in the business how, by using poor and out-of-date business methods and by their failure to co-operate—especially in politics—the profits that rightfully belong to them as producers go into the pockets of a few rich men, who produce nothing, but whose better business methods and control of politics enable them to take most all the profits. (3) To expose the various frauds that are practiced in connection with the poultry business. (4) To bring before the reader a record of my experience in the care and particularly in the feeding of poultry. (5) To deal with the housing of poultry as a science and bring it to a perfect state of development. (6) To show how the roup may be prevented. (7) To bring before the public my poultry system.

I have dwelt herein upon the failures I have had in order to show the poultry business in its least favorable light and to right the wrongs that have been done by other poultry books—books that paint such a brilliant picture of the poultry business that many from reading them get “poultry fever,” a very common disease which is usually fatal to your pocket-book.

At least 95 per cent of those who go into the poultry business fail. Do not forget that I have a poultry system to sell, but if this book brings you to realize what a small chance you have to succeed and saves you from losing your life's savings and from years of misery and poverty, I shall feel

well repaid, even though I should be the cause of preventing you from going into the business and perhaps putting in my system, which would mean a few dollars to me. I consider it less important to obtain a business success—regardless of the methods employed—than to save some one from a life of disappointment. Let us take, for example, a gray-haired couple, near the end of their road through life, ready to put their savings into poultry in the fond belief that it will prove a paying investment; under conditions that exist at the present time (1913) they would have about one chance in a hundred of success.

In this book I am giving conditions as they exist in the poultry business in California in 1913. When you read it, however, conditions may have changed, and if you intend going into the business or intend improving your farm you will do well to investigate my system.

The facts contained in this book are the result of fifteen years of practical experience in the poultry business in the greatly varying climatic conditions of the Sacramento, San Joaquin, Napa and Santa Clara valleys, in San Francisco County and in Petaluma, during which time I have experimented with every conceivable kind of poultry house and every "up-to-the-minute" device for the successful raising of poultry known to science.

The results from various systems of feeding have been obtained only after thousands of experiments had been made. During this time I have practically lived with hens; I have handled thousands of them at a time, each flock in a different condition, different surroundings, different locations, some flocks healthy, some unhealthy, some paying and some not paying. Some of my experiments were carried out on hens that were in a healthy condition and many experiments were

made with hens bought directly from the markets and in bad condition.

I know just enough about feeding poultry to realize how many things I do not know about the subject, but I consider that I have learned as much as most people in the profession, and I have attempted to disclose this information in this book in the way that should be most valuable to the reader.

I. ABUSES

I expect this book to be criticized by those who hold opposite views; it is difference of opinion that keeps life from stagnating.

To get at the facts of the causes of so many failures in the poultry business I have gone directly to the bottom of the whole question.

In order to accomplish anything toward helping poultrymen to obtain better living conditions—in order to accomplish anything toward reducing the enormous number of failures—it is necessary to bring into this book certain considerations of “big business” and politics.

When I think of the money lost, the careers spoiled, the misery that the 95% who are failures endure—among them many old people who lose their last cent—I feel as though I cannot ignore their suffering. Because I see such cases, see people in want, in sorrow, in desperation, see the last cent gone for food, see the end of their dream of a home, see them penniless, homeless, and friendless and too old to begin anew—I have been impelled to write this book in this way. I am impelled to speak plainly of the things that cause these failures, though in doing so I oppose the powerful influences of “big business.”

MISLEADING POULTRY BOOKS AND POULTRY PAPERS

I am going to set forth a few facts as to how a large number of people lose their savings through being misled by what they read in the poultry books and poultry papers.

✓ Many, through their natural desire for a home, are led to believe that they can get rich quickly in the poultry business, that they can make from \$4.00 to \$6.00 a year per hen, when as a matter of fact such a thing is impossible. Persons thus deluded are regarded as foolish by experienced poultrymen and have the sympathy of every honest one. The poultry books by misleading you may be responsible for your losing your money. When this happens they are, to my mind, just as guilty of robbery as the man who knocks you down and takes your money.

✓ Your grandmother raised poultry successfully, and you may have raised poultry on a small scale and have done well because your hens always laid well. They laid because there were plenty of bugs to go round, but when you got a large number of hens it is a very different matter. You are interested in poultry and you picture in your mind the satisfaction of conducting a successful poultry farm. You subscribe for a poultry paper, get some dealers' catalogues of poultry accessories, incubators, etc., and you obtain from these the impression that everybody is making money from hens. You read the "Questions and Answers" in poultry papers about feeding, disease, and before long you catch the "chicken fever"—a disease which you start to cure with a full pocket-book. The usual result is that the disease and the contents of your pocket-book disappear at the same time.

You read articles in poultry papers, written by some backyard poultry raiser who cannot make a success of the business himself but is always ready with advice. Most of them are better poultry writers than poultry raisers, but they supply only stereotyped information. You soon come to know what answer will be made to every question and you soon begin to be able to answer the questions yourself. Then you begin to think you know something about the business,

because you consider the writer a successful poultryman, but most successful poultrymen are too busy making a success to spend time writing for papers.

A short time ago a writer for a poultry paper which printed columns of his writings—believed to be authoritative no doubt by thousands of subscribers—was offered the management of one of the finest poultry farms in the United States. He accepted the offer, but in a short time the farm deteriorated into a bad condition and he resigned. He is never heard from now. If he had not made the mistake of accepting the management of the farm and had stuck strictly to writing and to telling other people what to do, he might still be writing for a poultry paper and might have become famous.

You take up a poultry paper and read of how Mary Smith dipped her hens' heads in coal oil or gave them quinine pills for roup, and how they all got well; or how she fed them on cayenne pepper and green onions because they were cheap, and how they laid so well that thereafter she never fed them anything else. That is the kind of rubbish that some poultry papers publish. It is that kind of trash that frequently causes people to practice inhumane treatment on dumb fowls. It is such articles as these that hinder you from learning correct methods.

The poultry papers, month after month and year after year, devote columns and pages to articles written by men whose experience is limited to a few hens in a back yard and who do not have to depend on them for a living. These articles are not only absolutely valueless to you, but are positively harmful; to every poultryman with experience they are ridiculous.

Year after year 95% of those who go into the poultry business fail. Millions of dollars are lost, thousands of careers

wrecked, and untold misery and suffering are endured. The poultry papers keep on month after month printing the same old articles, the same old cures, and their proprietors wonder why their subscription lists do not increase more rapidly. They opine that the great number of failures are the result of laziness and carelessness, and so they print articles occasionally, telling you that in the poultry business you have to work and work hard, or that you have to have a special talent to succeed. But the failures continue just the same, and seldom if ever does anything appear in these papers which might have a tendency to show people what causes these failures.

I know that the poultry papers, by changing their policies might lose some of their largest advertisers, such as the poultry-feed dealers, manufacturers of condiment nostrums, etc., but we do not care what Mary Smith did to mend the crooked toe of her pet hen; what we are interested in is knowing why 95% of the people who go into the poultry business fail. Poultrymen do not believe any longer that the 95% who fail do so on account of laziness or for want of a special talent, particularly when with the hens laying heavily it costs more to produce eggs than they will sell for.

We want articles that give us credit for intelligence; we demand articles on the conditions that are threatening our existence, and we demand that the large percentage of failures be prevented. We demand that a proportion of the large sums that are going into the pockets of a few rich men, who produce absolutely nothing, be turned into the pockets of the real producers. When this is done, and not until then, the failures will diminish. We demand that the powerful influence of the poultry press be used in our behalf. Is it not most important to print information on which the very existence of the poultry man depends—information which

would help him to change conditions so that he might live, and which might save many old people from losing their \$1,200 or \$1,500 and ending their days in misery and poverty? Or is it more important to continue wasting ink and paper on ridiculous and worthless articles?

The country is full of wrecked poultry farms. Why try to hide the facts? Many people will not want to read this book because it is written by a man who made several failures, and people don't want to read of failures, but I represent those who have failed. Let me say that I have also made several successes, but of those I am not writing.

Every success is given space in papers, but few of the failures are noticed. Isn't it just as valuable to know why a poultry farm failed, so that you can avoid the same fate, as to know why some other plant succeeded, so that you can follow its methods?

Is it not better to know the truth about the large numbers of failures, so that the conditions which cause them may be corrected and poverty and misery and sadness turned into wealth, gladness and joy? The poultry business has been the victim of more fakers than any business I know of. The poultryman has been misled and lied to, and has lost every dollar that could possibly be taken from him with the aid of clever writers, fakers of poultry tonics, egg powders, condiments, and all kinds of misleading books and systems and frauds.

The worst frauds of all are the poultry books, which lead you to believe that you can make \$5.00 to \$10.00 a year per hen and, by presenting visions of getting rich quickly, cause you to rush into the poultry business. You wake up to find yourself the victim of some one's lying ability and greed. You cannot make such profits with my system, than which there is none better, so how can you possibly do it with another?

Do not rush into the business after reading this book and put up a big plant, thinking you are going to get rich quickly; I do not want my enthusiasm for my poultry plant to influence you.

I take several poultry papers, printed in several different parts of the United States, and nearly every one of them has some device or worthless book by which, through the cleverest of advertisements, you are led to believe that all the secrets of the poultry business will be disclosed to you; or perhaps it is some one's fresh-air house where fresh air is supplied in abundance and absolutely without draught, or some worthless treatise telling you how to select laying hens. They are most all worthless. After investing you will soon find out that the houses are not draught proof, as rousp is to be found among your hens, and that your book containing the secret of selecting laying hens stole its secret from the Hogan System. Now the best part of the Hogan System is copyrighted and the other is merely a cheap and worthless imitation.

THE HOGAN SYSTEM

While speaking of systems, allow me to say something of the Hogan System. Walter Hogan of Petaluma, California, the "grand old man of the poultry business," author of the "Call of the Hen, or the Science of Selecting and Breeding of Poultry," is praised by the Petaluma Poultry Journal, which credits him with doing for the poultry business what Edison, Burbank and other wizards have done in their respective fields. Wherever I have been I have heard the good results that are being obtained by his system, and every one should own a copy of the "Call of the Hen," which is the result of fifty-six years of intelligent study. His book does not tell you that you can get rich quickly, but it does tell



Conboic brooder house. Many thousand chicks have been raised in this house, and not a single case of roup has ever been known.

you how many eggs hens will lay in a year with proper care, how many they will lay during their first, second and third years, and how to select breeders so that they will reproduce themselves—or, better, how to breed your strain into an egg type or beef type, etc.

The energies of some poultry papers are applied to relieving you of your dollar instead of helping you to change conditions so that you can save money. Their advertisements are worded so cleverly by men who spend months thinking out catchy phrases that will be attractive and will prevail on you to part with your money. That's the thing; never mind if there is not much merit in the goods advertised, the thing is to make the advertisement attractive—something that you cannot resist—so that the poultry papers get the money. After you get the book and after reading it carefully and trying to follow its teachings, you will see how badly you have been deceived and will throw it into the waste basket. If you are an experienced poultryman it will have done you no harm, but if you are not experienced and follow its advice—perhaps put up the fresh air house it said was draught-proof—you soon have not only fresh air but a flock of hens dying of roup. If it is a book with a system for selecting laying hens or telling you secrets that were not worth knowing, you are out your money and the victim of the cleverness of the advertisement writer.

My conclusions after reading many poultry papers are that they are in a great measure ridiculous; that they have an enormous capacity for printing articles of no value whatsoever; a great capacity for keeping their readers interested in the same old stuff that has been printed for generations; a great capacity for printing an article in one issue and contradicting it in the next, thus confusing the readers' minds so that they never know what to believe; an immense capacity

for selling worthless poultry books, etc., and a wonderful capacity for keeping their readers in a state of semi-consciousness and preventing them from waking up and changing conditions.

Advertising is a great help in selling anything. Look in every poultry paper and upon the shelves of every poultry-feed store and you will see advertisements of condiments, poultry powders, egg-making powders, tonics, roup cures, cures for this disease and that, and something to catch every odd cent you can possibly spare. To me these condiments, drugs, etc., are absolutely worthless; moreover, I claim they are positively harmful because they prevent you from learning methods of prevention.

The best results can be obtained by the proper balancing of pure, wholesome foods, and freedom from disease will be obtained by proper housing and the use of sanitary methods. Nostrums are not what you want; don't use them.

Remember the months that have been spent in thinking out the wording of the advertisements, and that the more clever they are the more likely are they to be merely masterpieces of the advertising man's art. Drugs are the poorest possible things upon which to stake your success. Search for the right foods, right conditions, right methods, instead of searching for a drug to correct the wrong condition.

A WORD ABOUT REAL ESTATE AGENTS

There is another class of men who contribute largely to the great number of failures in the poultry business. These are the real estate agents. I have seen so much of their work that a few words here will be of benefit to intending purchasers of poultry farms. We have recently been experiencing a boom in real estate in California. Millions of dol-

lars are being spent in subdividing large acreages. Some of the companies employ a large number of salesmen; offices are maintained in different cities. One company has spent thousands of dollars a day in advertising alone, and the expenses must have been enormous. They set forth in their advertisements how well poultry pays on their land, but the facts of the case are that there never was a successful poultry farm there, nor is there one today. After reading their advertisements you think that all you have to do is to buy a few acres, work hard, and you can make a good living raising poultry. The poultry business is set before you in its most attractive style, statistics are quoted showing what a demand there is for poultry and eggs, and you get the "chicken fever" pretty badly. You buy their land, start up in the poultry business, and before you know it you have a flock of dumpy, rousy hens.

One company in particular has run page after page of advertising in the daily papers, showing pictures of fine fowls and telling you what a splendid location they have for poultry raising. It is, as a matter of fact, one of the worst possible locations for poultry in the State. I lived a few miles from the place, where I had the management of a poultry farm; the wind blows continually; as one man expressed it, "It would blow the tail off a jack rabbit."

I called at the office at another location not very far away, owned by another company, and there I saw how the prospective poultryman was swindled. He was made to believe by a clever-tongued rascal that he could get rich quickly in the poultry business; that the place was the only one in California where poultry raising can be successfully carried on. This in spite of the fact that there is not one successful farm there, because there are only a few and these have just been started. When you go into the office, the sales-

man (who is sometimes a woman) sizes you up; some people have a talent for this and seldom make a mistake; they know just how to handle you. They stick to you like glue; they take no chances of letting you get away. The salesman is usually a man of pleasing ways, polished manners, and well equipped for the position he occupies. He has been taught since childhood that the only thing worth while is the dollar, and all his talents are used to get it. David Harum would have died in the poor house if he had made many deals with some of the real estate dealers I know. These men are engaged in a business in which competition is keen. Competition forces them to be conscienceless and heartless or to resign in favor of others who are. This being the case, they will tell you anything to sell land. They know that they are living under the "Do-others-before-they-do-you" method and they may as well "do" you as let the other dealer turn the trick.

One real estate man, not knowing who I was or where I came from, wanted to sell me some property for a poultry farm which happened to be just a mile from where I had lived for ten years. He showed me photographs of the place and the description he gave me took my breath away. According to his representations, this land was the finest on earth; it produced the finest vegetables and fruit, had the finest climate in the world, and was, in fact, a paradise. You can imagine my surprise. I knew this land to be about the poorest land in the State. He tried to sell it to me for \$100 per acre. I then told him I would sell him some land that I owned myself, located within one mile of his place, for \$10.00 an acre, and I also told him how poor the land was. He said he did not care about buying any more land, and then proceeded in the calmest manner possible, and without even a blush, to inform me that I did not realize the true value of the location or the soil. He did it so cleverly that I have

always believed this man to be the king-pin liar in the real estate business; I may be mistaken in this, however, for not long ago while managing a farm in a poultry center I was told a story that is famous in that district.

It seems that a real estate agent brought out a prospective buyer in an auto to see a place and asked him twice the value of the farm. The dealer took great pains in telling his man what a fine water supply there was. The "prospect" was very well pleased and intended purchasing the place. On returning a little later, the woman who was caring for the place asked him if he intended purchasing, and on being told that he did, she said: "Don't you know that there is not a drop of water on the place?" "You are mistaken, madam, as I tested the water and the tank is full." "Oh yes," she said, "but that water was hauled and put in the tank for your especial benefit."

Is this method of dishonesty and misrepresentation to continue? Are we always to use the motto, "Do others before they do you?" Or will there come a time when we will see the value of honesty and adopt a motto of "Do justice to others so that others can do well for themselves?" Are we always going to have a method of doing business that stifles the best that is in a man, offers the greatest rewards to him who puts his true self in the background and forces him to practice greed, injustice, and dishonesty, or can we change this method to one which will offer its greatest rewards to the honest and just man and bring out the best that is in all of us? Conditions are changing rapidly, and the unjust methods of doing business may yet change to honest ones.

A great many things tend to induce people to go into the poultry business. It looks to be so easy and poultry books and papers and real estate agents, etc., use all kinds of schemes to get people into the business. Some companies

go so far as to build a poultry farm to draw on others. Others go so far as to advertise that they have in their employ an expert poultryman who will teach you the business. Is it any wonder there are so many failures in the poultry business when you realize how many people engage in it who are utterly unfit for it?

You have the poultry papers painting a lovely picture of this business, and you have the real estate agents telling you how you can make an easy living at it. Incubator companies and a large number of poultry-food manufacturers, manufacturers of brooders and other poultry accessories put out attractive pamphlets and catalogues, some of which are works of art, and they all add their influence to get you into the business. There are also the breeders of fine poultry who issue catalogues with attractive pictures of their fine birds, which, if you have any real interest for poultry, you will want to own. There are the men who write poultry books, who claim to make from \$5.00 to \$10.00 a year per hen, and after you have read these things you are no ordinary individual if you can resist them.

You read of a little home in the country with chickens, from which, if you will work hard, a good living may be derived. Work? Why you may be willing to work night and day to get away from the life in the city, from the uncertainty of not knowing when you may lose your position, from the fear of losing your health and being forced into the poor house. You think of that "little home" with chickens in the country, and instantly there arises before you a vision of such a home and you determine to obtain one. You are just like everyone else; we all have the same longings. You are willing to work; why, you are willing to slave if you could only own your own home where you would be working for yourself and be your own master. You know that if you



The Conboie laying house. Roup has never been known on the poultry farm where this house is used

lose your job it will require a "pull" to obtain another, and as you have no "pull" you have a poor chance. You and your wife are growing old and you decide to make a last stand. You realize your condition and after reading the poultry books, and seeing the real estate agent, you buy a "little home" on the installment plan, a flock of hens, an incubator, some chick-food, and somebody's egg-food. You put your hens in "fresh-air" houses, and then you begin to work and you do this job and that and at night you are all worn out. You would not mind this if your hens would only lay, but for some reason that you do not understand your hens do not lay, your chicks all die, a large number of hens get the roup and die (although, like Mary Smith, you dipped their heads in coal oil). Next, you rush off and get roup cures to cure roup, egg powders and "tonic" to get the eggs started and "tone up the hens," but your hens get worse. You have been feeding your hens the best food on earth, but still no eggs come. You do not realize that it takes more to make hens lay than just buying egg-food and feeding it to them. You can feed egg-foods that cost fancy prices and not get eggs, for an inexperienced person can easily unbalance a properly balanced ration by a wrong system of feeding.

POULTRY FOODS

You must have experience, you must understand how to make your hens lay, and you should know how to mix your own feed and how the different effects which different grains, etc., have upon the fowls, even though you desire to feed prepared foods to your flock. There are good and indifferent poultry foods manufactured. Some of these are made by practical poultrymen with years of experience and are worthy of a fair trial. Some may be far better than those I shall

give you later, as I know only enough about feeding poultry to know what a vast and scientific study it is and how much I do not know.

When feeding anybody's poultry food or system, feed it exactly as directed. If the directions say to feed so much of this kind of grain and so much of that, it is because the inventor knows that it requires those amounts and those ingredients to balance his mash properly. If you are going to feed his system, follow his directions; if not, then feed some other system that you like better.

It has taken me fifteen years to learn what I know, still I know some people who learn more in one year than others learn in fifteen years or a whole lifetime.

When the beginner finds his hens are not laying on the egg-food, his chicks dying on the chick-food, and his hens dying with roup, his vision of a happy home begin to fade, and he probably gives up in disgust. If he is made of "sterner stuff" (which the poultry papers say you must be made of to succeed), he sticks it out a little longer and if he can hold out until spring when the old hens begin to lay he thinks he will win out. But at that time of the year the price of eggs may go down to a point where it costs more to produce them than they will sell for, and he is as bad off as he was before. After losing all he has and all he could beg or borrow, he is forced to give up. Was it because he did not work hard? No, he did work hard and he was willing to slave to succeed. Many, with their last dollar gone, have not a friend or a place to go to. What man wants to go to the poor house? What man wants to suffer the humiliation of a failure? I had several and I know that each one hurts more than the one before. What man wants to give up his home?

No one can ever know to what depths of humiliation I have been cast through making a failure. I lost home, money, friends, everything through my failures, and if I take these pages to warn you to be careful you will understand why I do so.

I hope my pen never leads any one to lose a single dollar through giving a false impression of the poultry business. I am writing this book for the purpose of telling the truth—the truth as I know it, a knowledge gained from practical experience.

When things begin to go wrong on the beginner's poultry farm, he does not know what to do. His hens stand around mopily, he is absolutely in the dark. He is like some men with a gasoline engine; they can run it when everything goes all right. So the poultryman can feed his hens properly and sometimes make them pay even without experience if he happens to be located where the ground is soft and the hens can get plenty of bugs and worms and green food and grain. Under these conditions he may make money—not through any knowledge of his own but through luck—inasmuch as the location supplies the hens with everything they need. They balance their own ration and lay copiously while there are plenty of bugs and worms, but when the ground gets dry and hard and too many hens are put on the ground, so that there is not enough natural food to go around, the hens stop laying, something goes wrong, just as when something goes wrong with the gasoline engine. Now, if you do not understand a gasoline engine, what a time you would have in getting it started if there was anything very radical the matter with it. You might work on that engine indefinitely and never get it going. You can do exactly the same thing with hens. You must have experience and lots of it. You want to become just as expert at making a hen lay after she has

stopped, and be just as sure about it as the expert is with the engine. He knows instantly where to look for the trouble—not from books he has read, but from having the same thing occur before in actual practice. That is the main thing; having the thing happen and profiting by the experience.

The expert knows every little sound, every little false motion the engine makes, and he knows just how to correct it; the more experience he has had and the more troubles he has had to overcome, the more expert he becomes. It is exactly the same thing in feeding hens. By careful experimenting you learn why hens eat grit by the mouthful, why they eat dirt, why they eat charcoal and will leave grain and go for these things like mad. You also learn why a hen will eat wheat and not corn, and at other times will leave the wheat and fight for corn. You also learn by careful watching of the droppings and by taking note of the cravings of a hen what to feed her to keep her in good health and how to make her lay if she is not doing so. You will learn these things by carefully experimenting, and by studying this book very carefully you also learn how to produce large eggs, with yellow yolks, and plenty of them; you also learn so to feed your hens that in a short time after starting laying they will not “turn over” or start on the downward grade and stop laying. These and countless other things you learn, but, like the engine man, you must have the practical experience.

Reading these things from a book may enable you to find what troubles your hens, but it can never take the place of practical experience. There are always some little things that come up that the book does not cover and which you must study out for yourself. This is so in every profession and in every trade and the poultry business is no exception.

The poultry business is a profession, which requires years of experience to learn, and feeding on a small scale and in

small flocks is quite different from feeding on a large scale and in big flocks. If your feed is right, it is just as easy to handle poultry on a large scale, but if your feed is not right you will have more hens out of condition and the hens out of condition should be separated from the others. When you separate the non-layers and feed them a little differently from the layers you can handle them in large flocks just as well as you can in small ones. The larger the flocks and the larger your plant, the more experience you need. If you go into the business, go in on a small scale, experiment carefully and have some other source of income so that you do not have to depend on your poultry for a living. Go slowly, be careful, and do not let the fever overcome your caution.

The way to experiment is given elsewhere in this book. Remember that you are not going to learn in a day or a month what it has taken others years to learn; that you cannot get the best results at first, or if you do you will be the loser thereby because if everything goes along smoothly you will have no opportunity to learn what to do when things go wrong. What you want to know is why the machine broke down, how to fix it, and how to prevent it from breaking down the next time. That is the experience you want, so that you may always be prepared.

HOW TO DESTROY LICE

One of the first things that people ask me is what do I do for lice, and may I say that a certain amount of lice is good for a hen. The treatment of lice is the simplest part of the poultry business. By painting the roots with a good lice-killer, especially the under sides of them and every place where mites are likely to live, I have avoided all trouble from mites, and by mixing a good lice-killer or a little crude car-

bolic acid and sawdust and putting this in the bottom of the nests and then putting shavings on top of the mixture, trouble is avoided there. I sprinkle one end of the lattice yard very slightly with water, and hens by the hundred will dust themselves in it. Care must be taken to sprinkle very lightly on the soft, dry dirt, so as not to get it too damp, for if that is done the hens will not dust in it; if, on the other hand, it is just slightly damp they are very fond of it. For the large head lice I put grease on the head or use something equally as good, but for other than head lice I provide the damp, soft dirt and the hen frees herself of the parasites.

You must thoroughly understand that it takes experience to make success, and you cannot put up my system or any other and make a success of it without the necessary experience unless it is done by accident. You get into the business, put up my system, and in a little while you have made a brilliant failure and I get the blame, as it is pointed out that you had a Conboie System poultry farm and failed with it; it cannot, therefore, be any good. You conclude that you think the system does not amount to much, and all your neighbors form the same opinion. The result is that you lose and I lose, because you jumped into a business without knowing the first principles of success. Your venture spelled failure from the start and any experienced poultryman could have told you so. After you have finished this book, turn back and read this part over again, so that if you are looking at this business through rose-colored glasses you will see your mistake.

First learn something about the business by experimenting and then go into it carefully; there is money in it only for these people who do this. By experimenting, you are getting experience in the cheapest possible way; you cannot lose much with a small number of hens. Remember it takes time

to learn and there are many discouragements to overcome, and that which is worth doing is worth doing well. Whatever you do, don't make the most fatal mistake of all: Don't think that the people who are now engaged in the poultry business know less about it than you do; you may be able in time to "show them," but it will be several years before you can do so. The majority of people in the poultry business know little about it, but there are a few who know it thoroughly and have studied it very carefully from a great many different angles.



The Conboie Automatic Segregating Feeder. (Patent pending.) Also showing the laying room and drinking place.

II. PERSONAL EXPERIENCES

I had a position paying me a good salary which I gave up for a small job on a poultry farm and I have struggled through fifteen years of poverty and discouragement—many, many times with the bare necessities of life and sometimes without even these—so that I could continue my experimenting, and learn the secrets of the hen. I have been an object of ridicule for many; I lost every dollar I possessed; I lost every friend I had. I have struggled through, and I have seen so many homes lost by poultry people, people with experiences similar to mine that these memories are ever vivid to me.

Shall we, under the present method of doing business, forget such things as honesty and kindness? If we do, then the quicker we change our methods the better. Even an outcast from the lowest depths can and will respond to kindness, and kindness will bring out the best that is in even the worst of us; kindness will lead to success where injustice will bring disaster.

I started into the poultry business fifteen years ago. Everybody told me that my hens would get the swell-head and die, but I was going to go into it even if they did, because I was interested in hens and if others could make a living in the business, why not I? I bought incubators, etc., and hatched 2,200 chicks that year, and as I then knew positively nothing about the business I lost 2,100 of them. I was located on the bank of a creek far out in the wilderness, and one morning I looked out of my poultry house and saw the hens all perched up on the roosts. The house was three

feet deep in water, as was the house I was living in; we were in the center of a stream a mile wide where formerly it was only about one hundred feet wide. The water came within two inches from coming into the house and the hens were perched on their roosts for three days. I came to the conclusion that where there was three feet of water it was not the best place for raising chickens. Either I would have to go into the duck business or move, so I concluded to move.

I began again in the fall to raise chickens at another location. When I had no more than got started, the wind blew my living house down, so I decided to leave this place also.

After getting another place I again began to raise chickens, and this time I was successful and raised nearly all I hatched. A large incubator company, seeing the success I was having, and the interest that I was creating in the poultry business at this place, appointed me their agent and as such I became very well known in this vicinity. Everything here was going well and I sent \$1.00 to a poultry paper for S——'s Method of Feeding Hens for Eggs. The formula and directions were as follows:

- ¼ part of Corn Meal,
- ¼ part of Beef Scrap,
- ½ part of Coarse Bran.

Feed enough of this mixture so that the hens eat it up clean before night. Feed dry. By this system of feeding hens seldom have indigestion and will lay all the eggs you desire. With this system of feeding hens do not require green food. By actual test hens that had no green food layed better than those that did have. Keep grits, bone, shells and charcoal before them at all time and feed equal parts of corn, wheat, and oats, 5 quarts per day to 100 hens.

The papers printed numerous testimonials from prominent poultrymen all over the United States—some of whom were known from one end of the country to the other. These poultrymen claimed that this system of feeding laying hens was the best that had even been brought before the public, and strongly advised its use. S——'s Method is a good method under some conditions, but under other conditions that you will presently understand it is worthless.

I built a large house 32 by 100 feet, with an alleyway running through the center of it. It was divided inside into pens every 10 feet, and it also had a yard 10 by 50 feet for each pen. I had this full of beautiful white leghorn hens, 7 months old, and I will say that those pullets were in the best health of any that I have ever seen on any poultry farm I have ever visited. The wind was broken by the trees, which were very thick, and while there was not very much sun in the yards and the yards were damp in wet weather, I had not a single case of sickness of any kind whatever among the hens. I did not lose a single hen; every hen was the picture of health, and the roup they had when young disappeared entirely. There was not a single case of bowel-trouble all the time I kept them, except one day when I used meat-meal instead of "Beef, Blood and Bone." A great many people from all around the country came to see these hens, and they were pronounced by all to be the finest that they had ever seen.

These hens had been badly afflicted with roup when they were young and in the brooder house. I bought Roup cures—enough to cure all the hens in the country—but I soon found out that roup cures do not work if you leave hens or chicks in draughty houses, such as I afterwards found this brooder house to be. I was pretty much disgusted with roup, but after the chicks were older and were put in a large house

in the oak grove, out of the draught, they soon got well without the aid of any roup cures, and I have never had any faith in roup cures since.

These hens were fed S——'s Method, but as there was no beef-scrap in California at that time, the editor of the poultry paper advised using "Beef, Blood and Bone," which I did. At first I fed wheat, oats, and corn for grain, but I soon found that the hens did not care for the oats and corn, and I stopped feeding these two grains, but they were crazy for wheat. They would eat wheat and not touch the other grain, and twice a day I would feed two and one-half quarts of wheat to them about 8 A. M. and again about an hour before sundown. These hens knew feeding time as well as I did, and it was a beautiful sight to look out and see the hens running up and down along the wire fence in their separate yards when feeding time approached.

Make them work? Why, there was no such thing as making them work; you could not stop them from working, scratching, and playing in the straw and litter, in which I scattered the wheat. I do not know whether I used any particular kind of wheat or bran, as I just bought it from the grocery store and the hens were in fine condition, but they did not lay. They would work (I call it play) until dark and they could no longer see, and bright and early in the morning you could look out and see them scratching in the litter. When I say provide a place for your hens to play, you know what I mean, for it is only play for the hens to scratch if the conditions are right, the feed is right, and when the hens are in good health. You do not have to make a hen work any more than you have to make a healthy boy play. It is fun for the boy and it is fun for the hen, but if the boy is not feeling well it is work for him, and if the hen is out of condition from wrong feeding or improper

housing it is work for her; she does not need work then; sick people and sick hens need rest. What hens need is a properly balanced ration and a properly ventilated home—the same as yourself. If these conditions are provided, you will notice that whereas you could not previously make her work you cannot now stop her from playing. But your ration must be correctly balanced, or your labor is in vain.

My hens were scratching most all day, but they were very fat and laid only an occasional soft-shelled egg. One thing which I wish to impress distinctly on your mind is that, although these hens were scratching most of the day, they were very fat—too fat to lay, although in excellent condition otherwise. I have never since been able to keep hens in such a condition for so long a time, although I have often fed the same feed but from a different milling company.

I fed S——'s Method—except that I used wheat for grain and "Beef, Blood, and Bone" instead of beef-scrap—and did not feed any green food, but no eggs resulted. I then thought that if fat was the cause of my not getting any eggs I would quickly remedy that, so I continued feeding the wheat twice a day, but instead of the S——'s receipt I gave them dry bran for a week. I was sure that that would reduce them, and after a week of the bran and wheat feeding I would give them the S——'s receipt again. In a few days the feathers began to fall from the hens, especially the feathers of the neck. The dry bran caused a moult, although not a very heavy one. (Hens should never be fed on dry bran with such a little amount of grain, unless they are very fat, and the result is apt to be disastrous to the weaker ones if continued). The combs of the hens now began to turn red, they began to cackle, and the eggs began to come by the hundreds. The hens would keep this up for about a week and the soft-shell eggs would begin to appear again, and at

the end of a week there were a lot of fat hens but no more eggs.

I would then go back to the bran treatment again and get the same results as I got before. I repeated this several times, as I wished to be sure, and each time I got the same results. I concluded, therefore, that I thoroughly understood that part of the poultry business and decided to change my feed a little.

After feeding bran and wheat for a week I did not feed the S— receipt, but used instead the following formula:

½ Bran
¼ Middlings
¼ B. B. & B.
Wheat 5 qts. to 100 hens
Green food.

The hens started to lay just as they did when they received the S— receipt, and at the end of two weeks I was getting 66% of eggs per day. I then began to look for the soft-shelled eggs to appear, and I was also expecting my hens to stop laying as the days went on, but the soft-shelled eggs did not appear and my hens kept on laying and did not stop. Now, in order to be sure that it was the corn that prevented them from laying, I put corn in the mash instead of the middlings and in a few days soft-shelled eggs began to appear and in a short time the hens stopped laying. Then I cut out the corn in the receipt and put in middlings, and in a short time my hens began to lay again. I repeated this experiment over and over and over again and got exactly the same result every time.

I began to think I knew something about the poultry business. Had I not by repeated experiments proved that corn was not good for laying hens? I had proved it over and

over again. I learned then that I would have to depend on myself, and I thought I knew something about the poultry business that no one else knew. I was positive that corn was not the proper food for laying hens, for just as soon as I would begin to feed it, the hens would stop laying, and just as soon as I would use the middlings they would begin to lay and would not stop. Could anything be plainer?

I wondered how the originator of the S— Method had ever used so much corn meal in his ration; I wondered if he were not just another fraud. I wondered if by any chance I could be mistaken. I had read in the poultry papers that corn was a fine poultry food and to feed plenty of it; also that hens preferred it to wheat. I would try to feed whole corn to the hens, but they refused to eat it every time, and I thought the poultry papers were wrong. When I put it in mash instead of middlings my hens got too fat and stopped laying.

I was very eager to succeed—to “make good” in the poultry business. I had dreams of having some day the greatest poultry farm in the world. The poultry papers said that it took hard work and lots of it to succeed in the poultry business—in fact 365 days of hard work every year. Well, if that would make a success I was going to succeed; I would never for one second neglect my hens. I was very ambitious, but I soon found out that hard work will not make a hen lay an egg, whereas right feeding and proper housing will.

I have never neglected my poultry for one minute since I started in the poultry business. I have never fed them food that I would not eat myself, except beef-scrap or granulated milk, and of these I always got the best. I have at times stinted myself in order that my hens might have the best food to eat. I was eager to learn, to know exactly how to make hens lay eggs, and I knew I would never learn unless

I were very particular both as to the quality and quantity of the food I gave them. I always gave the exact measure, so that I might be sure of my experiments.

In view of this care and in view of my obtaining the same results with the S— Method time after time, I concluded that corn was not good for laying hens.

Don't forget how careful I was in conducting my experiments. I was absolutely sure that my deductions were correct. Right here, permit me to say that I make the biggest mistake of my life, a mistake that ruined my poultry career, broke me up in business, and blasted every hope of my "best poultry farm on earth."

I had gone three years without making a cent; I had been paying out all the time in the hope of ultimate success. Now I was getting bucketsful of eggs every day. I accepted the price the retail grocer gave me (12c per dozen), but after paying the feed dealer 30c to 50c on the dollar above quotations for grain, I was rapidly losing money. As far as my hens were concerned I was making a great success of the poultry business, but there were other conditions that prevented me from making a real success—conditions that would force me either to sell out or go "broke."

I sold my hens and thinking I could get better prices for eggs if located near San Francisco, I rented a place near there and began again. If I had been able to buy my feeds at a reasonable price and had obtained a reasonable price for my eggs at the first place, I might have been there yet. I had undoubtedly made a great success, as far as producing eggs went, but it was entirely by accident that I did so. It happened that the food balanced correctly, the hens' digestion perfect, and I was in ignorance of the true conditions; this was proved by my subsequent experience, from which I learned the real facts.



Electric incubators used by Conboie.

Poultrymen often balance rations correctly by accident and are very successful for a while, but as their success is the result of an accident they remain in ignorance of the facts and later frequently meet with failure.

I had gone nearly three years without making anything. I had learned a little by experimenting, but it takes money to live and I did not have much left. After renting a place near San Francisco I bought several hundred hens and had visions of making money rapidly on account of the better price I received for eggs. I was now going to reap the benefit of the knowledge I had gained.

I bought the same meat from the same firm that I did before and mixed it the same way, as follows:

$\frac{1}{2}$ Bran,
 $\frac{1}{4}$ Middlings,
 $\frac{1}{4}$ Beef, Blood and Bone,
Wheat, Green food.

While I was congratulating myself on the location I had obtained and on the fact that, as far as keeping my hens in excellent condition was concerned, I knew the poultry business, and because I was getting 60% of eggs a day, I came out of my dream and began to think that in the matter of making hens lay I knew nothing about the poultry business at all.

Work? Why, I never stopped working. I carried on my back the finest kind of green food from the vegetable gardens along the ocean to my little poultry farm two miles distant. Later, after several years of failure and my capital entirely exhausted, I obtained a position in San Francisco for six months of the year; every morning I would take the train at 6 A. M., ride ten miles, then walk one mile and work in steam and water for eighteen and twenty and many times

for twenty-two hours a day. You cannot tell me you make money merely by working hard; I tried it and I know.

That is why I laugh when one mentions hard work to me in connection with success in the poultry business. If I got through by 11:50 P. M. I would take the street car home; if I did not get through by that time I would sleep on the sugar sacks until it was time to go to work again. During this time I was very sick for six months, but I worked just the same.

Every morning before I went to work I would see that the hens were properly cared for that they might be all right for the rest of the day. I fed my hens exactly as I did at the other place, but instead of beginning to lay they began to die. They would stand around all day in the shade and would not scratch, nor could I make them do so. They did not seem to be hungry and when I would feed them their grain they would eat a little and then go back again to the shade or to the roosts.

I never knew before what bowel trouble among hens was, but I know now. I had not encountered any at the other place, but now almost all my hens had it. They would eat granulated bone by the sack; it seemed as though they could not get enough. When I broke up crockery and glass and gave it to them they would eat it as my other hens had eaten wheat. I cleaned the town out of broken crockery. In the droppings of the hens there would often be nothing but crockery. One day when breaking coal for the house I saw the hens were crazy for it, although they always had charcoal before them; they ate all the chips that flew off which were of a certain size—about the size of corn—and thereafter I would sometimes spend hours breaking up coal for them. It did them no good, however; in fact, nothing I did seemed to do them any good.

The food I gave them almost turned them inside out. It was the same food I had fed before, the same, "Beef, Blood, and Bone," the same proportions in the mash; I fed it in the same way; everything, as far as I could see, was exactly the same, but these hens died on the same food on which the others had lived and laid. One flock of hens was sick and stood around; the other hens were healthy and full of play. One flock of hens was a source of trouble; the other flock had been a source of satisfaction. One flock of hens had kept me; but I had to work to keep the others. I could not understand it at all.

I had to begin to experiment again. I fed every receipt that I had ever heard of, and many others that I worked out myself. Sometimes I would think that I had solved the problem, but in a few days I would have to change again, as I could see that there was something wrong. Every time I made a failure with a new feed I had ten others that I was sure would work. As I had several pens to experiment with, and as at times I lived with these hens from daylight until dark and watched them very closely, I would think each time I changed the food that I learned a little. I would think each change would bring the desired result, but for four years at this one place it was one continuous disappointment.

Sometimes I would run an experiment for a month; I could tell how others acted in a day. I read in the poultry papers "make your hens work," and so I would try to make them work. I would buy nice new straw, put it in the houses and yards and feed the hens in it. But they did not want to work and some of them died as a result. Some would scratch for a few minutes and then stand around. Once in a while I would scare them out of the corner, but it did no good; they would soon be back again. Once in a while they

would eat a little dry mash, but only about one-fourth of what the other flock of hens ate. The hens that were the weakest ate the least.

I thought that if I could not make them work when they had the dry food in front of them, perhaps if I should dampen the mash slightly so that it would hold together and scatter it in the clean straw and on the clean floor, they would work more. If, as the poultry papers said, it was on account of the accumulation of fat on the hens that prevented them from laying, by making the hens work more this would be worked off. I had already tried the dry bran, but the hens began to die, and I had to change. I tried making them work for a couple of weeks, and the results were very bad.

During this time quite a number of my hens did not eat a bite and several died. I saw that this system of feeding was not good, and so I went to the wet mash system, feeding grain in the morning and mash at night. After several weeks of this system of feeding, my hens were in an awful condition. Roup was now prevailing in the flock.

I used pure, fresh blood in the mash instead of "Beef, Blood, and Bone," and the results were worse.

For years I changed from one system of feeding to another and from one food to another, feeding one pen a little differently from the others. I confess that I made about the most brilliant failure of any one that ever engaged in the poultry business. After eight years of the hardest kind of work I did not have a cent—eight years of studying faithfully the methods advocated in the best books ever written on poultry by supposed experts. After eight years of this I knew absolutely nothing about making a success of the poultry business. My knowledge consisted of knowing only a great many things that would not work.

Among my hens was one young leghorn pullet about six months old. One morning I heard her outside the door cackling. I opened the door and she came in. After a while she made a nest on a sack and laid an egg. I grew very fond of this hen, and I would give her a cup of wheat and a cup of oats and let her help herself. She also ate bread and milk left by the dog, and she seemed fonder of this than of the grain. Day after day that hen would come into the house and lay. When she was outside I would see her scratching in the ground for worms. Very seldom would she miss a day without laying an egg.

The other hens, I noticed, would not eat for a week or so at a time. Then I would notice them scratching for angle worms. A crust would start to form on the comb, the comb begin to turn red, the droppings become clean and free from odor, and the hen would start to lay; but she would, however, lay only a few eggs and then she would be taken sick, her droppings would be bad and she would be sick for a week or so. This would be repeated about every fortnight, and the hens would become gradually weaker.

The hen that came into the house did not eat the mash food that the other hens ate. She never stopped laying. She seemed to be nice and fat and had all the grain she could possibly eat, while my other hens all seemed to be poor. I thought that if the grain helped her it would probably be a good thing for the flock, so I put out a sack of wheat for the other hens. They were very badly afflicted with roup, and there were no worse looking hens in the country. They were also afflicted with canker.

I turned them out to roost in the trees. Never in my life have I seen hens change so quickly. In a few days nearly all of them were out scratching after worms. They would go after the wheat, and then the eggs began to come.

Now and then I shut up fifty of the hens in ten different pens and placed before them different grains, beef-scrap, and bran and middlings, thinking that they would go on laying. But in a short time they stopped laying, while the hens running outside kept right on. The hens had by this time gotten over the roup and canker. The cure had been effected by an abundance of fresh air without draught in a sheltered spot.

At this time I had to move to a different location where the ground was not soft as it had been at the other place. The hens could not scratch and get worms and bugs, and while they had a larger place to run and were fed in the same way, they soon stopped laying. Bowel-trouble appeared and roup also began to come back in the flock. I noticed that the droppings were full of pin-head worms, sometimes as many as fifty passing from one hen at a time. There were also many long, round worms from a fourth of an inch to five inches in length. Many times a large number of them would be found in one pile. These hens were kept in colony houses.

As they stopped laying, I was again forced to experiment. I fed corn and oats, as the poultry books advised, but the results were disastrous, as quite a number of hens got white diarrhoea and were in an awful condition. The more corn and oats I fed the worse my hens became, and the less I fed the better they would be. This turned me once more against corn.

I began to feed mostly wheat and dry bran, with a little meat scrap, but got no results. Then I read of a man who advocated feeding dry bran in a hopper, and wheat, oats and corn in straw, and also placing beef-scrap in a separate hopper; but I could not make this work, either!

At the same time I fed several hens I had shut up the same way I had fed the bread-and-milk hen, but they would not lay. I kept on experimenting, and it seemed as though

nothing I could do would make these hens lay. I concluded I had made another failure such as everyone can expect until he understands the business, which was little satisfaction to me.

I still had the bread-and-milk hen. She always ate in the house. I would watch her eat to find out why she laid. One day I thought I would fool her and gave her a little extra meat—5% in a mash in the morning and at 4 P. M. As a result I had an awfully sick hen. She staid on the nest all day and laid two eggs, the last egg being soft-shelled, with a soft-shelled piece about two inches long attached to it. I thought she would die, but she did not, although she did not eat again for several days. In a couple of weeks she was laying again.

It is wonderful what can be accomplished with foods. By a badly-balanced ration a hen will be knocked off her feet, have leg weakness, become paralyzed in different parts of her body, and develop all kinds of diseases.

I believe that most diseases of hens and human beings come from a badly-balanced food. A more important thing than the feeding of poultry is the feeding of human beings. Wonderful results can be obtained by the use of proper foods. My main reason for writing this book is to obtain money to go on with my experiments with hens, as I believe the knowledge so gained can be turned to the use of humanity. How can drugs cure when your food is wrong? How can good results be obtained by a wrong system of feeding? Is it not a fact that through a badly-balanced ration a hen gradually becomes weaker and often develops tuberculosis? I believe that the same thing holds true with human beings. We become weak from wrong feeding and are easy prey for deadly germs. We rush to doctors and seek their aid, but the disease has got a start and it is hard to cure. If we

understood how to feed ourselves properly, such things might be prevented. Everyone knows that "an ounce of prevention is worth a pound of cure."

Obtaining a chance of a better place, I now moved again. Again I tried the S— Method, but the hens did not want to eat it. I turned them all out, and they went straight to a manure pile where they got an abundance of bugs. I put out a sack of wheat for them, and the eggs began to come fast. They laid so many eggs and in so many different places that it kept me busy looking for nests. The hens were in good condition now and kept right on laying.

I had ten pens about six feet square, with five hens in each. These I fed as I had fed my pet hen. The food consisted of the very best bread, thoroughly dried and ground to the size of coarse bran. Here is the formula:

10 Bread,
1 Milk ground fine,
Wheat and green feed.

Feed the bread and milk dry and keep it before hens at all times.

Since my first experience with the S— Method I had always fed my hens green food. Each of the pens was fed on the above food. One pen was fed 1 part of milk to 5 parts of ground bread, and the next pen a little more bread and less milk, and so on until the last pen got 1 part of milk to 20 parts of bread.

The hens that got 1 part of milk to 5 parts of bread laid smaller eggs than the others. The pen that got 20 parts of bread to 1 of milk did not lay quite as many eggs. It seemed that the ration given to the pen that got 1 part of milk to 10 parts of bread was the most evenly balanced, and I therefore began to feed all the pens in that proportion. Those hens laid more eggs than any hens I had ever owned in my



Lattice yard of laying house.

life. Many times I would get 45 eggs from 50 hens and more than once I got 50 eggs. The hens laid month after month, but never set. The eggs were of medium size.

The hens, however, developed a little bowel-trouble, which finally caused me to give up this ration. I tried two pens on bread soaked in fresh milk instead of the dry bread and milk, but the hens soon stopped laying. On going back to the dry bread and milk they began to lay again.

I believe that the feed has everything to do with the laying condition of a hen. The more I experimented, the surer I became of this fact. I made a success of this place, but not through any ability on my part. The hens that were running out and laying so well did not eat the mash I gave them, but got their food outside.

I next moved across the bay for a while, but I soon obtained another poultry farm and started in again. I bought several hundred hens. They were a remarkable lot. When I got them they were not laying an egg, and it seemed that some of them never took a bite of food. I worked with those hens and met one disappointment after another. They would eat grit and charcoal, and I tried various foods to stop them; I could not, however, supply them with a mixture that helped them, and I went from one thing to another without success. This went on for a long time, and I finally found myself without a cent.

These hens were the wildest I ever saw in my life; if I was in one corner of the block, they were always in the other corner and that was the closest I ever got to them. I had just read Jack London's book, "The Call of the Wild," and I was sure he got his idea from hens. On reading Mr. Hogan's book on the science of breeding and selection, in which different types of fowls are classified, I looked to see if he had classified this variety. They might have been of

the beef type, but they certainly were not of the egg type, for I did not get enough eggs for breakfast. These hens were related more to the "Call of the Wild" than to the "Call of the Hen." In fact, they were so wild that I called them the "wild type," and their wildness seemed to extend to everything on the place. My wife grew wild, I grew wild, and our's was indeed a wild poultry farm. In fact, things grew so wild that the hens flew one way and the home went another. Though I make a comedy of my failure, it was in reality a tragedy, such as is every home broken by the poverty which often follows the poultry business.

Some time after this I met a man who wished me to raise poultry for him on shares; I accepted. Of all the deals I ever had, this was about the worst. For a brooder and feed-house I used an out-building, which, according to this man, was everything that it should be. It had a history running back to his boyhood days. It was over a cellar, in which the water stood six feet deep in winter. The brooder lamp of the hot-water-heater was under the floor, and the water that stood in the cellar in winter came within about two feet of the lamp. To get at the lamp to clean and light it, I had to float around in this water on a log. There was a draught under the floor and occasionally the lamp would go out. I would have to float around on the water to light it. The brooder was 3x14 feet.

The first hatching went all right. I had a very hard time getting the owner to put up a building so that there would be a place to put the chicks after they got bigger and I could have the brooder ready for the next hatching. He finally consented, but by the time we got started the next hatching came off. I had about 600 chicks three weeks old in the brooder and I had about 600 more just hatched to put in the same brooder, which, as I have said, was 3x14

feet in size. I could not get them all in the brooder, and when I think of this I wonder how many million of chicks die through similar carelessness.

When it rained the brooder house leaked, and there were three inches of water inside of it. I saved the chicks from drowning by filling in straw, but it was a terrible mess. We were building the other house, and I was arrested for putting up a building without a license. After the building was half finished, the man I was working for was told that there was no money in chickens; someone told him of some people who had failed at it, and he wrote to stop all work on the building. The building had half a roof on and no front, and I had to put 600 little chicks three weeks old out in this shed without any warm brooders. It was very cold and the rain was so heavy that everything was floating in water.

I kept up my experiments, and it was here that I first noticed what a difference there was in the droppings of my poultry between one week and another. I noticed that although I would feed these hens dry bran the droppings would be large and white, where the others were yellow and foamy. I did quite a lot of experimenting then, though nothing in particular came of it at the time. It left its impression on my mind, however.

I next received an offer to go to Santa Cruz and put up a poultry plant for a man who had just bought a place there. When I arrived I was put out to sleep in a shed from which they had taken out several dogs. The place was frightful. After being there one week, I was ordered out of this place by the former owner, as the new owner had no right to the place for several months to come, having allowed the former owner several months in which to harvest his crops. I went and slept out on the banks of the creek in a place they called Happy Valley.

Walking down the road one day I opened a gate for a stranger and his wife who were in a buggy. The man thanked me and made some inquiries about the neighborhood. He must have noticed my forlorn condition. He asked me where I lived, and when I told him he laughed and drove on. Later on he returned from the place he had visited, got out, and crept down the steep hillside through the dense underbrush to where I was. When he reached me he said, "I am not a rich man and have no more of this world's goods than I can make use of, but I am sure I have more than you and it would please me very much to help you." I thanked him and declined his aid. I told him that I thought I would come out all right. If that man could have only known how my heart was filled with gratitude to him,—if he knew how many times in later years I have thought of his kindly act, he would have been rewarded in some degree for his kindness. By giving kindness you are in fact receiving it; it returns to you tenfold. This man, as I afterward found out, was a real-estate dealer.

I had, after a while, a chance to install another poultry farm and did so. I had a little better opportunity there to study and experiment, and I learned very rapidly. There it was that I learned the importance of the variation of grains, and there it was that I got the first intelligent understanding of my other failures.

I was carrying on several experiments. In four pens I was running as follows: Pen No. 1 received 1 part granulated milk, ground fine, to 10 parts of bran, and wheat for grain; Pen No. 2, 20 parts of bran and 1 part of ground milk, and wheat for grain; Pen No. 3, 30 parts of bran and 1 of milk, and wheat for grain; and Pen No. 4, 40 parts of bran and 1 of milk, with wheat for grain. The hens in Pen No. 1 began to pick up and look pretty good; those in Pen No. 2 looked extra good; those in Pen No. 3 did not look so well, and in Pen No. 4 they began

to moult. After running this for three weeks, Pen No. 2 hens were in fine condition and from five hens I got about two eggs a day. But eggs were not what I was after; I was after health and condition. I wanted a foothold, a foundation, to stand on,—a method of feeding to which I could return instantly and get the same results every time. This would be extremely valuable to me, especially when a hen was run down after a prolonged experiment.

Many, many times I thought I had such a method, but it would soon prove to be inefficient in one way or another. I tried the food I fed to Pen No. 2 on all the other pens, and in a short time the hens in these pens looked as well as those in Pen No. 2. I wanted to try this out thoroughly, and I fed these hens so that they would go down hill rapidly. Then in about a week I would return to the feed they got in Pen No. 2. I tried this five times on four pens, or twenty experiments in all, and got the same results every time. I was now satisfied that I could always get the same result by going back to the same feed.

I then began to make other experiments, as I wished to get the droppings just a little stiffer. I used corn in three pens, but to my surprise, instead of the droppings getting stiffer, they became a little looser, although the hens ate a large amount of dry mash containing corn. I could not understand this then, but a little later it became very simple. One thing that made me think was that in the pen where I used wheat, oats and corn the hens would fight for corn and would not touch the other grain until after the corn was all gone. I did not pay any particular attention to this, but a short time later it came to me like a flash. I understood the situation; it was a secret to me no longer. It takes time to learn, and one has to make a great many mistakes before getting things exactly right. Many times the same mistake is made over and over again, because you do not possess the secret.

I now changed the feed to one recommended by an experiment station, and my hens began to lay well. In a short time, however, they would "turn over"—that is to say, they would come up to their greatest laying point and then gradually fall off. I would then start another pen on the same ration and with the same results. I believe that I tried every receipt known to the poultry business. I knew there was something wrong, but did not know what it was.

Some of the hens were not looking very good, so I thought I would make them brighten up. I started them on the feed I had fed to Pen No. 2, which I had tried out by twenty separate experiments, but instead of picking up as the others had only three of the hens did so. These began to lay nearly every day. On exactly the same food the other hens had laid only about two eggs a day for five hens. The other two hens in the pen continued going down hill very rapidly.

Here I was getting a different result from what I got in every other experiment. Wasn't there any chance of my ever learning anything? Was it my fault? Did I know anything at all? What was the matter, anyway?

I now put ten pens on this feed and from these experiments I got exactly the same results as I got in my last experiment, differing wholly from the results I had from the twenty original experiments. In these last experiments the hens that were in the best condition would increase in their egg production very rapidly, while the other hens got sick.

The hens that laid would shortly want to set; I tried this food on a large flock of layers, and I was kept on the jump picking out setting hens. Every coop on the place was full of setting hens. I tried this food several times again, and each time it would make my hens set. I have since proved by repeated experiments that food is the cause of making hens set, in the face of the fact that only a short time ago a poultry expert,

who travels around the country and who, I believe, is employed by the government, wrote an article for a poultry paper, stating that food has no effect on making a hen set. I do not wonder we advance so slowly when we are put off the right track by men who are supposed to know. On another page in the same paper was a piece on the same subject by another poultryman, whom I had never heard of before. He claimed as I do—that it is the food that makes hens set. If the ration is properly balanced, the hen will lay right along and very seldom set. Such was the case when my hens had the bread-and-milk ration. They never set, but laid better than any hens I ever owned. If the ration is over-balanced, a hen often goes to setting after laying only two or three eggs, and you will often notice in feeding ready-mixed foods that your hens will lay many eggs but in a short time will begin to set, and you will have nothing but setting hens on your farm, which is not very profitable. Too much protein in the feed is the cause of this trouble; it may be caused from too much protein in the beef-scrap or too much protein in the wheat or bran. It is particularly noticeable that a change of bran will cause it.

The first twenty experiments caused the hens to grow large red combs and to continue to keep in good condition, although they laid only one egg about every other day. About a month later in conducting the same experiments the hens in the best condition began for a little while to lay nearly an egg a day, and then wanted to set. The hens that were not in such good condition became worse during the last ten experiments. The hens that were entirely out of condition picked up in the first twenty experiments and looked fine.

No wonder I could never learn anything about the poultry business. Wasn't it possible ever to obtain the same results when I gave the same feed? Why should a few weeks or a few months make any difference, especially in the spring of the

year? Why, after only a month's time, should I get entirely different results? Could it be possible that the climate could affect hens to such an extent in so short a time? I could not believe it.

I found out long ago that the knowledge I needed was not to be had in poultry papers, poultry books, or experiment-station bulletins. Why didn't they say something about such a case as I then had, so that it would benefit me? I could not find anything to cover my case, no matter where I looked. Why is not something written about these conditions? It seemed to me that the papers and books contained everything but what would enlighten me and lead me to success. I did not care what Mary Smith did; I wanted facts; I wanted to learn. I eagerly read everything I could get hold of, but every book was absolutely worthless to me. Not one fitted my case. I noted that no two books agreed, no two experiment stations recommended the same ration, every poultry raiser fed a different ration, and each had a different system of feeding. Why was this? Why don't they all agree? Is it because each flock of hens require a different food? Are the egg-producing organs of one flock different from those of another flock on the other side of a fence? Why should not all hens be fed the same? Why is it that there is no "best" poultry food? Why is it that after years of experimenting no two men agree? Why is it that the experiment stations do not send out the same formulas? And why is it that you will often meet a man who has been in the poultry business for twenty years or more who says frankly that although he tried hard he knows no more about it than the day he started in? It is unquestionably true that each experiment station and each poultryman is trying to gain the best possible results to increase his knowledge and to make the poultry business more profitable.

The importance of the food question is entirely underestimated. The variations are far greater than they are supposed to be,

and poultrymen either do not understand them or are at a loss how to master them. Through a thorough understanding of the variations in grains—an understanding which can be obtained only after practical experience and experiments—the whole secret of the poultry business is laid bare; the method of making hens lay eggs is no longer a mystery. This is the secret of why no two men or experiment stations agree and why there is no one best poultry food; also, why a man makes a success at one place and meets with failure at another. This also explains why such different results are obtained from poultry in different locations, and why one man will sometimes make a success of poultry and yet remain in ignorance of the facts.

What is food for one may be poison for another, and while this is positively true, yet in nearly every case there is an exceptional reason for it. Take my own case, for an example; it may be read by some poor human being suffering from the same trouble as myself and through my experience he may be able to return to the road of health. I was taken with a severe dysentery and for six months I was very ill. I saw different doctors, but nothing did me any good. Then I was advised to take milk and nothing else, and for days and days I ate nothing but condensed milk—about two tablespoonfuls to a glass of boiled water—and I got well. But the organs were naturally weakened, and if I am not careful I become sick immediately. The milk, however, works every time.

Now the same thing happens to a hen. If her organs are weakened through a long period of bowel trouble, she will become sick more easily than another hen that has never been weakened. You must be more particular with her food. There are foods that will agree with all of us. It is possible to run 1,000 hens together in one flock and have no sickness among them. But the ration must be properly balanced and made of

the right ingredients. If your ration is right, the food will be food for all and poison to none.

When I obtained such different results from the last experiments, I made a careful analysis of my feed and I found that the only possible difference there could be was in the bran. I had used the bran for the last experiments from a later shipment from the mills, and I thought that that might be the reason of the difference. I got out the sack of bran that I had used in the original twenty experiments and it looked exactly like the other bran. I mixed up the ration of twenty parts of bran and one part of milk and fed it to the five hens which I will now call Pen No. 1. Then I mixed up the same ration, using the other bran, and fed it to five pens which I will call Pen No. 2. These pens were fed wheat for grain, and after about ten days the fowls in Pen No. 1 looked fine and began to lay, while those in Pen No. 2 started to lay but soon began to set. **Here were two entirely different results obtained from exactly the same rations, the only difference being that the brans used were from different shipments, although they were exactly alike as far as appearance was concerned.**

Now, in order to be sure that it was the bran that caused these opposite results, I reversed the feed, gave Pen No. 1 the bran that Pen No. 2 had had, and gave Pen No. 2 the bran Pen No. 1 had had. In a short time the Pen No. 1 hens started to lay and then to set, exactly as the hens in Pen No. 2 had done, while hens in Pen No. 2 gradually came into fine condition and laid about every other day. I repeated these experiments time after time, and would get the same results each time. Here at last a light dawned upon me—a light from out of the darkness of years. Here at last I saw the causes of my other failures; I understood at last why I had never been able to make head nor tail of

the poultry business. If I had only known this before, how many disappointments in my life would have been avoided!

I thought now "If this is the cause of my failures, how many other failures has it caused?" "Is not one's success in the poultry business to be measured by one's knowledge of these variations and by one's ability to use them to advantage?"

This is not necessarily true in all cases, because a man may sometimes make a success by accident, especially if his hens run on soft, rich ground. But are not these variations accountable for the fact that when one moves from one place to another, using grains differing in protein, one may make a failure in one place and succeed in another? Is this not the reason that some people do very well in the poultry business for a while and then lose money rapidly, so that in a short time you see a "For Sale" sign on their property? They get grains and feed, a ration recommended by an experiment station, and the grains they use have about the same protein as those used by the station. Later, in a different shipment, the grain varies and they do not know why they do not get the same results. Such a thing may easily put one on the wrong track. One begins to feed some other kind of feed and keeps on this wrong track until failure ensues. At the end they know no more about the poultry business than the day they began.

Is not the existence of such variations the reason why some people cannot raise poultry at all, although they closely follow the system advocated by the experiment stations?

Does this not explain why experiment stations do not agree on rations, since they may all be working with grains which differ in protein?

Why is there no one best poultry ration?

Why do no two men feed alike?

Does this not explain why there are so many different systems of feeding hens?

Does it not explain many of the mysteries of the poultry business?

Does it not show why your ration is correctly balanced at one time and the next time it is not balanced and you obtain a different result?

Does it not explain why some men do not use as much meat as others and still get good results?

Does it not also show why some people raise chicks without losing more than 5% of them, while the man next door loses 95% of his chicks on the same food? They may both feed the chicks the same ration and keep dry bran before them all the time, but the difference in the bran and wheat that each man uses is so great that one man balances his ration correctly and the other does not.

Almost everyone knows the great variations that exist between red and white wheat, but the variations I mean are found particularly in white brans, exactly similar in appearance.

Do not these variations explain every secret of the feeding of poultry?

Last but not least, do they not explain exactly why men who have been in the business from one to fifty years say, "I know no more about the business than the day I went into it; it seems that I can not learn?"

This offers an immense field for intelligent men to enter and an occupation that is extremely interesting, instructive and one which is going to be very profitable. The poultry business is in its infancy; its possibilities are enormous, and it needs men who will use scientific methods, men who are eager to study and to learn. It wants brains, not muscle; it requires intelligent application of scientific methods, hard

thinking, not hard working. The work should be made a pleasure, not a drudgery. Machinery should work, not men.

One great fault about the poultry business is that there is too much muscle in it now. It is hard work as it is conducted today and it is not a very encouraging prospect to take up. Thirty dollars per month does not look like much to most people, but by using up-to-date methods, and with the feeding of poultry and poultry foods thoroughly understood, it will not require hard work and the man that can get results is going to command a good salary.

The difficulty lies in not thoroughly understanding the variations in grains. It is this which is responsible for many of the failures in the poultry business—a fact which is clearly shown in this book. I should like to see every man who feeds poultry, whether he is on an experiment-station farm or on a poultry farm, make investigations along this line on his own account. The facts that will be obtained will be of enormous benefit to the poultry industry. I believe also that the facts so learned will be of inestimable value to the human race, because when this problem is thoroughly understood mankind will benefit as much from it as will poultry; there is not, as a matter of fact, very much difference between the two. We put "rocks" in our pockets, whereas chickens put them in their gizzards.

I believe that we are coming to the large intensive poultry farm. This seems to be the goal. I believe it will prove to be a big success before long. You must creep before you can walk, but to operate a large farm successively will require intelligent men, hard thinkers with a great deal of experience and a thorough understanding of grain variations, feeding and housing. If there is such a variation in brans, that opposite results will be obtained from their use when all other conditions are alike, there must also be just as great

a difference in wheat and in all its products. That there is a very great difference in wheats is shown by the following analysis of nutritive values:

Bluestem	1:10.0
Club	1: 9.9
Chule	1: 8.8
Plump	1: 6.9
Russian red.....	1: 6.8
Shrunken	1: 4.6
Shrunken	1: 6.5
Turkey red.....	1: 6.8

I do not know what effect the soil has on wheat. Grain gets all its nutriment from the soil and soil differs about as much as human beings. It would seem that the soil must have some effect on grains, but that could only be determined by analysis. Mills, in making what is termed "Baker's Flour," use a very large percentage of Turkey Red wheat, but in making flour for the "family trade" the Bluestem is the most used. The nutritive value of Turkey Red is 1:6.8, and the nutritive value of Bluestem is 1:10.0. I do know that bran from Bluestem wheat has a different effect on hens from Turkey Red bran, and the nutritive rations differ greatly. One contains more protein than the other, and the Turkey Red is non-laxative.

	Crude protein per cent.	Starch, sugar, etc per cent.
Turkey Red	12.20	70.92
Bluestem	9.00	77.05

The difference is great. I know this, not from tables, but from practical experience. But I do not know what bran it was that caused me to obtain such opposite results, for I have had to stop experimenting. I hope some day to take this up where I left off.

Every mill has its own brand of flour, made from its own special blend of grains. Some brans are squeezed more than others and contain less flour, so you can see that the variations of brans are many. If the poultryman knows of these variations, if he only suspects that they are the cause of his failures, he has a great part of his battle won; it is in not suspecting the real cause that he loses. Knowing these variations, he can learn to balance his rations accordingly, this he can learn only through practical experience. When he thoroughly understands this he can make a success of the poultry business almost any place or in any climate.

It requires more knowledge to make a success of the poultry business than any other business that I know of. You not only have to have the experience, but you must also have the capital and you have my sympathy if you tackle it without either. If you have the capital, you may employ one who has the experience.

In using wheat I use the red wheat, which is soft. In California we get a good wheat called Russian Red. I do not know that it is any better than the Turkey Red wheat, and in fact it may not be as good, but I am more familiar with it.

Remembering how crazy the hens were for corn in some of my other experiments and what a large quantity of mash they would eat if it contained a little corn meal, I came to the conclusion that the reason they ate so much of the mash was in order to get the corn that was in it and that the reason their droppings became loose was on account of the laxative qualities of the bran they were forced to eat in order to get the corn.

Here were hens that wanted nothing but corn—quite different from those beautiful pullets I had years before. Remembering how the other hens seemed to be crazy for

corn, I began to experiment with corn, and it was then that I solved the secret of my failures. It will prevent you from following the same road to failure that I followed so faithfully. It points out those rocks I stumbled over and which you can now avoid.

Now I went back to the S— Method. I fed Pen No. 1 two parts bran, one part corn-meal, 10% beef-scrap (ground fine), and wheat for grain; Pen No. 2, one part bran, one part corn-meal, 10% beef-scrap, and wheat for grain; Pen No. 3, one part bran, one part corn-meal, 10% beef-scrap, with wheat and corn for grain. Bran running high in protein was used. The droppings in Pen No. 1 became very watery in a short time, and two of the hens became sick and I had to change the feed. Pen No. 2 did fairly well, while in Pen No. 3 the hens came into fine condition, the droppings became good, and they began to lay the finest, largest eggs I ever saw. Here for the first time in many years I was able to feed corn at all, and it was the first time I was ever able to do so and get eggs.

At the time I conducted the above experiments I also had three pens on exactly the same rations, only I used a different bran—a bran that was low in protein. Pen No. 1 with this low protein bran—two parts bran, one part corn-meal, and 10% beef-scrap—showed exactly the same condition that those fine hens showed years before, exactly the same kind of droppings, and all the same results.

These experiments showed me plainly the causes of my failures and my successes. My great trouble had been at different places I would get grains and mill feeds which varied greatly in the quantity of protein they possessed, and as I never suspected this or never understood its real importance, I kept landing on the same old rock year after year. I would get off the right track, feed wrong feeds, and waste

months and months, experimenting with a variety of foods, when all I really required was corn. If I had only known enough to stay with bran, corn or middlings, beef-scrap and wheat, and had not used false feeds, what a difference there would have been in my life!

I have found that with some grains, though they are scarce, more eggs can be obtained without corn and that hens will lay well without it, the reason for this I believe to be the use of the non-laxative bran low in protein. You may add more beef-scrap to the ration, get a few more eggs, but you will not get the results you would if you used middlings instead of corn. You will find most brans run high in protein, and when using such bran you will find hens want corn and lots of it is absolutely desirable as far as my experience has taken me.

One thing I am positive of: That with some kinds of bran and wheat corn is not necessary and results can be obtained without it, but with other kinds—and they are in the great majority—corn is actually one of the best poultry food there is.

I next accepted the management of another large poultry farm where I had a better chance to continue my experiments. I had no one to bother me, as I had at other places where people thought I knew nothing because I experimented with a few hens. (I lost more than one place on that account). At this place I made a success of a poultry farm under the worst possible conditions. It was the worst possible location for poultry farming, which was just what I needed to show me not only what I wanted to know about feeding, but also about roup.

In one poultry house I had about 1,000 hens and I had for experimental purposes 100 hens shut up in pens of five hens each. I tried the same experiments I made at the place

I just left. I tried them over and over again. I would go to the mill and get one kind of bran and then another kind—also many different kinds of wheat. I was enabled to do this because there were different kinds of bran and wheat coming to this mill all the time. These experiments were kept up for a year, and in that time the truth of my deductions regarding the variations of grain were proved beyond the possibility of a doubt.

I would increase middlings and oats in the mash, and by properly balancing it with beef-scrap I would get many more eggs than when I fed only the bran, corn and wheat method. The hen in one pen receiving one part of bran, one part of corn-meal, one-half part of middlings, one-half part of ground oats, and one-half part of beef-scrap laid very well, but in a pen having the same feed except for a trifle more meat the hens would be knocked down and would be unable to get on their feet, like persons suffering from paralysis, and would be afflicted in many different ways.

III. FEEDING

Hens sometimes lie on their sides and cannot turn over. Sometimes they lie on their backs and cannot move, and if not provided for will starve to death. Hens will do this on some brans with which considerable meat is used, and many rations so effect them. I have found this to be the rule where the ration was over-balanced with protein. They become helpless, and it is the food that causes this and nothing else.

If it causes these things in fowls, it must also cause human beings to be similarly afflicted. Instead, therefore, of using drugs, tonics, etc., get down to the real facts. Throw away your drugs, get after the truth. Gnawings in your stomach, dyspepsia, and such things are all caused by a craving for some certain food, and when you find that food you will be relieved. If you feel like eating anything, eat it; that is, if it is a natural food and not seasoned artificially. Candy, for instance, if indulged in continually, will create a craving for more, and if this craving is constantly relieved with candy, harm will result because candy is an unnatural food. If you crave sweets, eat bananas, figs, prunes, oranges, and other fruits without seasoning. Eat all you want. They are natural foods; they satisfy a natural craving, and no bad effects will be felt.

A hen running out where she can get plenty of bugs, worms, grain and green food balances her ration perfectly and has no disease; but the moment you shut her up so that she no longer gets natural food, the trouble begins.

There is no one, no matter how clever, who can feed hens or human beings as well as nature can. Nature is greater than the mind of man.

Some particular foods and fruits do not agree with some people and should be avoided by them. If you have a continued craving for the harmful food, a fruit of the same flavor should be tried. If you feel like eating meat, eat it; the lack of it may cause a craving, but you must be sure that it is not the seasoning you put on it that has caused the craving. The Jews, recognizing the harmful results of eating pork, do not eat it at all. Years ago on the farm we had pork constantly, and it soon showed its effect upon my system. I began to have eruptions and boils and this continued for years. All the humiliations I have experienced through my failures in the poultry business do not compare with the suffering I went through as a result of eating too much pork. Pork causes eruptions and is very bad for eczema, etc. I was looked upon as something to be shunned or as though I was a sufferer from leprosy or from some other dreadful disease. I went to many doctors; I took this blood purifier and that, first one thing and then another. This went along for years until I finally began to believe it was due to pork; I stopped eating it and I got well without any medicine.

Take a hen that is running out on soft ground where she can scratch and get plenty of bugs and worms and excellent results will be obtained by giving her a sack of wheat, oats and corn, which are natural foods. She obtains other natural foods in the ground and her instinct tells her what to eat. She knows far more about it than we do, and if we attempt to shut her up and put the grains in a sack in front of her, she, being unable to obtain her other natural foods, will



Inside view of brooder house, showing electric brooders used by Conboie. Automatic feeders and part of roosts in position. These are raised when not needed.

cease to lay. Her instinct is blunted by the unnatural food. We must balance her ration for her, and do it properly if we ever expect to succeed. The only way we can learn this is by carefully observing the effect different foods have upon hens under different conditions.

If you wish to learn the business get fifty or one hundred healthy hens and experiment upon groups of five placed in pens. By doing this you will get experience at the lowest possible cost. There is no danger of your losing much money in this way, and you will thus find out whether or not you want to go into the poultry business. Read this book carefully and do not get on wrong roads and lose time thereby. Keep your ration as simple as possible.

I have taken charge of many places where the hens were in bad condition. All had bowel trouble and hundreds of them would remain on the roost all day and refuse to eat. Such hens are the kind that I like to work with, although it may be very discouraging, for one can learn from them things that never can be learned from hens in good condition. You think the food has nothing to do with their condition, but turn them out where there is plenty of bugs, grain and green food, and before you know it they are laying and as healthy as any hens you ever saw.

Learn all you possibly can about feeding a simple ration. You will find enough variations in grains without going after them in the form of different foods. Have several pens on the same food and run your experiments until you are able to see the exact results that each change brings. Notice the condition of each hen in every pen. When you change the food remember her condition if you possibly can, as she may not be in the same condition as the other hens and it may take her longer to come into condition.

If the reader will follow me carefully, I will take him through fifteen years of experimenting in a few pages.

The first experiments will be on hens in good condition, and the last experiments will be with hens that are out of condition. This will give him an idea of the difficulties of the poultry business and will be of the greatest value to those who are trying to make a success of it.

It is not enough that poultry books should say "use lots of common-sense in feeding poultry" or recommend such and such a grain for hens. Writers say that a little of this grain and a little of that is good for a hen, but such advice is worthless, for adding or taking away a half part of meat (in such a ration as No. 9, given below) when you are feeding, say, $6\frac{1}{2}$ parts of mash to one of meat, or changing to a different brand of beef-scrap or mill-feeds or grains, or changing the ground grains in the mash constitutes the difference between success and failure. You have to be very particular; one part more or less makes a great difference in many rations.

We shall now start out with directions for experimenting on hens in small numbers—five hens to a pen. As there is no perfect ration in existence for all locations, climates, and conditions of hens, we wish to know the faults of each ration, how each acts on hens in poor condition as well as on those in good condition. We shall state these faults after each formula, so that you can take advantage of the knowledge thus supplied, and if you go into the business and encounter certain troubles you will know what causes them and how to correct them.

In starting to experiment we must have a foundation feed to work from. All rations are measured, not weighed.

RATION NO. 1

(Foundation Ration for Experimental Purposes Only.)

1 part of bran,
1 part of corn-meal,
10% of beef-scrap,
Wheat and corn for grain; green food.

Faults and Good Qualities of Ration No. 1.—When this ration is fed to hens in flocks, a large number of them will stand around after a few days and not care for grain, especially if they are in bad condition. When hens have watery droppings of a grayish-white or creamy color, or white diarrhoea, this food is bad for them. But if the hens have no bowel-trouble this food will put them in good condition, especially if they have been fed a strictly wheat ration, and the droppings will be tight with very little yellow. The eggs will be very large, will have a fine flavor and a large yellow yolk.

When experimenting, we should not return to this ration in case we have poor digestion, very watery droppings or real white diarrhoea, in which case we should feed ration No. 11.

We shall start five pens of five hens each on ration No. 1, and in each pen we shall use one part more of meat. The pen getting the most meat will be getting six parts of mash to one of meat, and the pen getting the most mash will be getting ten parts of mash to one of meat. We shall continue these experiments for three weeks.

The hens getting the most meat may lay the most eggs, but the hens getting the least meat will be in the best condition. Although they will not lay many eggs, the yolks will be yellow and the eggs will be very large. Even with this

heavy corn feed there will be no soft-shelled eggs if the bran is rich in protein. Hens will lay about 50% on ration No. 1.

When beginning to feed this ration the hens may be influenced by the ration they had before, and go after the corn greedily at first; but after a couple of weeks you will find that they prefer the wheat. If we are using a very heavy or a low-protein bran, the hens may become fat. Ten per cent of beef-scrap in ration No. 1 is low.

RATION NO. 2

2 parts of bran,
1 part of corn-meal,
10% of beef-scrap,
Wheat and corn for grain; green food.

Faults and Good Qualities of Ration No. 2.—This ration is very apt to produce watery droppings when a laxative bran is used and digestion is bad. With some grains and with certain conditions of hens, if the droppings become watery and the ration is continued, it may result seriously. With some grains and brans this food will cause the droppings to be large and white; the hens will be entirely free from bowel troubles and remarkably healthy. Under those conditions wheat for grain can be very successfully used. The condition a hen is in must also be taken into consideration when feeding any ration, as some hens' droppings will remain good with considerable abuse, while other hens are easily affected by the slightest change. Hens will lay about 70% on ration No. 2. Using 10% of beef-scrap in ration No. 2 is high, and probably a little less should be used when feeding five quarts of grain to 100 hens.

RATION NO. 3

1 part bran,
1 part corn-meal,
1 part middlings,
7½ parts mash to 1 of beef-scrap,
Wheat and corn for grain; green food.

Faults and Good Qualities of Ration No. 3.—This is a heavy ration and is not as good a ration to return to in case of bowel-trouble as ration No. 7 (which see below; neither will it start hens to laying as quickly as No. 7, although it is a good laying ration. The amount of beef-scrap is about right. In experimenting on these five pens we shall use one part more meat in each. The hens getting the most meat (six parts of mash to one of meat) will act as though getting too much meat. They will be inclined to go to the nest frequently without laying, and there may be more bowel-trouble than usual. The hens getting only 10% of meat do not lay very many eggs, while the hens getting about 7½ parts of mash to 1 of meat do the best. The hens will lay about 65% of eggs on ration No. 3.

RATION NO. 4

2 parts bran,
1 part corn-meal,
1 part middlings,
10% beef-scrap,
Wheat and corn for grain; green food.

Faults and Good Qualities of Ration No. 4.—This is a most excellent ration when fed with the right grains. It is not as good a ration as No. 7 under all conditions. The amount of beef-scrap given is about right, although it may be a little high with some grains. In the five pens we shall use from seven to twelve parts of mash to one of meat. The hens get-

ting seven parts parts of mash to one of meat we soon find are getting too much meat, because the hens that are in laying or near laying condition are inclined to go the nest frequently, although this is not always the case. The hens getting 10% of meat do the best. There is not much bowel-trouble on this ration if digestion is good and hens will lay about 70%.

RATION NO. 5

2 parts bran,
1 part middlings,
10% beef-scrap,
Wheat and corn for grain; green food.

Faults and Good Qualities of Ration No. 5.—This ration, if fed to hens in bad condition, will cause them to have considerable bowel-trouble, with yellow droppings. When hens have indigestion it is a very hard ration to depend on, as the hens may eat grits, etc., in quantities and refuse to lay. If flour middlings from red wheat are used, and the hens' digestion good, the hens will often lay 70% of eggs a day. With some grains and conditions of hens this ration can be used, but as a rule it is not a very good ration. Ten per cent of beef-scrap is high, and probably 8% of meat should be used. This, however, depends upon the variations in grains.

RATION NO. 6

1 part bran,
1 part middlings,
1 part shorts,
10% beef-scrap,
Wheat for grain; green food.

Faults and Good Qualities of Ration No. 6.—This ration, like the others, if fed to hens with poor digestion, will cause

a large amount of bowel-trouble. Many times a hen will not lay on a strictly wheat ration of this kind when she has poor digestion, but by adding a little corn they sometimes begin. Ten parts of mash to one of meat is about right if a limited amount of grain is used. Hens will lay about the same as they do on ration No. 5, but the amount will vary on all these rations because some people will balance them more correctly than others and because of the difference in grains, in the condition of flocks and various outside conditions.

RATION NO. 7

1 part bran,
1 part shorts,
1 part middlings,
1 part whole yellow corn, ground fine,
10% beef-scrap, ground fine,
Wheat or wheat and corn for grain; green feed.

Faults and Good Qualities of Ration No. 7.—Where bran and middlings are used and it is desirable to use mostly wheat this ration is the best given. It is hard to get a better wheat ration than this and I believe it is used by more poultrymen than any other ration.

Some poultrymen use a ration of 1 part of bran, 2 parts of shorts and 1 part of corn-meal. Many poultrymen vary ration No. 7 one way or the other but no better combination on these grains can be made than the one given in this ration.

The reason there are so many variations made is due to the variations in grains and conditions of hens.

If 10% to 12% of bone meal is used in the mash continually it will often prevent the hens from any tendency there may be to over eat.

Do not change from one ration to another. Ration No. 7 is as good as any ration that is made up mostly of mill feeds. Learn to feed it correctly. Hens will lay about 70% on ration No. 7.

RATION NO. 8

1 part bran,
 1 part of corn-meal,
 1 part of ground oats,
 7½ parts of mash to 1 of beef-scrap,
 Wheat and corn for grain; green food.

Faults and Good Qualities of Ration No. 8.—This is a good ration when hens are not troubled with indigestion. In case the droppings are watery this is not a very good ration to use.

The comments on ration No. 3 will answer very well for ration No. 8. The only difference is that with No. 8 the eggs are sometimes a trifle larger, but this does not always hold good. After we have tried these experiments carefully, we shall now return to our foundation ration (No. 1) for about 10 days or until our hens begin to tire of corn. Then we shall feed the following:

RATION NO. 9

(“The Egg-a-Day Ration”)

1 part bran,
 1 part corn-meal,
 ½ part middlings,
 ½ part coarse (¼ if fine), ground oats,
 7 parts mash to 1 of beef-scrap,
 Wheat and corn for grain; green feed.

Faults and Good Qualities of Ration No. 9.—This ration, when fed to hens in very bad condition and in some loca-

tions and circumstances, may cause the droppings to become watery and be of a grayish-white or cream color. Under these conditions the hens will not lay to amount to anything, and instead of getting an egg a day you would not get an egg a month. When hens are out of condition, with indigestion, it is not very easy to make them lay on any ration, but there is no reason for them to be very much out of condition if they have been raised on Ration No. 14. When hens have watery droppings return to Ration No. 11, and they will become well. What they needed was the right ration, not drugs, because it was probably the combination that caused the trouble. Remove the cause; do not add some drug. When beginning to feed this ration, those people who do not think that feed is as important as I say it is should watch these hens very closely and see the wonderful change that takes place in their cravings and appetite. When you observe this, you will realize how important little changes are, and how much science there is in feeding hens. If the hens know the value of wheat and corn you will see that where before they did not care for corn they will now fight for it, especially in the pens getting the most meat, although nothing has been added to the mash but one-third of oats and middlings. It is important to know this when feeding large flocks, for you know just what craving a certain combination of grains will create, and how to take advantage of that fact.

By these experiments we find what a wonderful effect little changes have upon the hens, and understand how poultrymen continually work in the dark, blunder on in blindness, and never learn. We find out the technical points of value and get down to the practical and scientific points of feeding.

You see how many people continue to make a failure of the poultry business, and the value of these experiments is that I have showed you in a very few lines how a very slight

change in the food has created a craving in the hen for corn. To discover this one little point took me years, during which time I made thousands of experiments. These "little things" shed light on the mysteries of feeding and enable the poultryman to come out of the darkness and into the light.

We find that in the pen getting 10% of meat, the hens lay fairly well, while the hens getting about 7 parts of mash to 1 part of beef-scrap lay an abundance of large yellow-yolked eggs. So well do hens lay on this ration (No. 9) that those which test very high as layers and have the capacity to lay an egg a day will do so on this ration. I call it therefore the "Egg-a-Day Ration." But it has to be balanced perfectly, and all conditions must be perfect, in order that this may be done.

Hens out of condition do not eat as much mash as the laying hens, and therefore get less protein, which is proper. Under such conditions a hen will come into a laying condition more quickly than she otherwise would. When a hen begins to lay on Ration No. 9 her appetite increases enormously and she will eat from two to four times as much mash as she did before—depending on how correctly balanced the ration is.

If she is in good condition and all conditions are right, she will be free from bowel-trouble, and she will be healthy as it is possible for a hen to be. By keeping the right food at the right balance, your hens will be good for several years, although one-half part of meat added to the ration may so overbalance it that hens will be gradually weakened and in a year or so will die—not from laying themselves to death, but from a badly-balanced ration.

Rations No. 14 or No. 9, balanced correctly, and when conditions are right, will keep hens healthy for years, and the more eggs they lay the healthier they will be. Many

poultrymen claim that they get all there is from a hen the first year, but I think they are mistaken, as I am sure that by the feeding of an unbalanced ration they ruin a hen in a year and she is good for nothing after that. Moreover, I have made experiments on hens three and four years old and got an abundance of eggs from them.

It is impossible to get all the eggs from a hen the first year, and it is very easy to ruin the very best of hens in one year by wrong feeding. Hens will lay about 80% on Ration No. 9, and I have had as many as four and five eggs a day from five hens.

Under some conditions where I used this ration it has given me better results than any other. The hens were in fine condition, had no bowel-trouble and laid very heavily. At other locations, however, I have not been able to get as good results with Ration No. 9 as with Ration No. 14. Hens fed 6 parts of mash to 1 of meat will lay a very large number of eggs at first if they are in good condition; otherwise, it may kill some of the weaker ones, and while they will probably lay a larger number of eggs at first, the eggs will in a short time get smaller and the hens will be inclined to set, and some of them will be "knocked off their feet." This is the case where the bran is high in protein.

RATION NO. 10

1 part bran,
1 part corn-meal,
1 part middlings,
1 part coarse ground oats,
7 parts mash to 1 of beef-scrap,
Wheat and corn for grain; green feed.

Faults and Good Qualities of Ration No. 10.—In the experiments I have made with Ration No. 10 I have found that

hens are more apt to have watery droppings and white diarrhoea, especially if a little flour is added to the ration, than they are on Ration No. 9. But it is possible that other conditions were to blame, and the results I obtained were misleading. When hens are in good condition and other conditions are favorable, this ration will produce an abundance of large, yellow-yolked eggs, and the hens will lay about the same as on Ration No. 9.

When feeding this ration, if one-fourth part of low-grade baker's flour is used it will increase the size of the eggs. Many poultrymen consider Rations No. 9 and No. 10 too heavy. All that is necessary to obtain a lighter ration is to add a high-protein bran. You can thus make the ration as light as is desirable without having to change any of the other ingredients.

I have found that one part of meat to twenty parts of bran is all that some brans need for a correct balance that will make a hen lay. Therefore where we use seven parts of mash (No. 9) to one of meat, we do not need to add any more meat but simply add a little bran, unless we are already using too much bran, say, four or five parts to one of mash.

We have now experimented on hens with the best rations and, it must be remembered, we have experimented on healthy hens only and have shown the best results from the rations given. Let us now get to work on hens with indigestion, in bad condition, and show the bad results of the same rations.

Let us say we have been feeding Ration No. 9 and we are getting an abundance of eggs on this feed. We naturally think, therefore, that we know something about the poultry business, and so we get a flock of hens and start in in earnest. These hens are in bad condition when we get them, or become so shortly afterwards. They have bowel-trouble; many of them stand around and when you go to feed them

they are not very hungry (hens should be very hungry all the time when fed Ration No. 14 or No. 9). Many of them remain on the roosts all night and all day. (No matter how good a flock of chickens the novice in the poultry business buys and whatever their sex, by inexperience and wrong feeding he will turn them in a short time into roosters).

We shall start feeding these hens on the Foundation Ration No. 1. We have about 1,000 hens in this flock, and we see that after the second day a large number of them refuse to eat grain and stand around. We find out that while Ration No. 1 worked well with a small pen of hens with good digestion it is worthless on a large flock with poor digestion, and so we shall go to Ration No. 2. We feed this ration for a short time, but the grain we are using is inclined to be laxative and we find some of the droppings are very watery. If we continue this feed, it will result seriously to many hens. We notice that the hens in the worst condition have bowel-trouble, inclining to white-diarrhoea.

Watery droppings and white-diarrhoea are not the same, and we must not get the two confused.

We now change to Ration No. 5 and the watery droppings are not so bad, yet the condition is not so good as if we used Ration No. 7. We are not getting many eggs and, reading where some poultrymen force their hens to lay by using a large amount of meat, or, as the experts say, "Run their hens at high pressure" (misleading terms, since they give the impression that one can force a hen to lay, when the fact is that one cannot do so). We feed six parts of mash to one of meat, using Ration No. 5, and try to force them to lay. We "run them at high pressure," and before we know it many of our hens begin to die and some act as though the food were turning them inside out. They eat

glass, rocks, bone-meal and charcoal by the sack, and the droppings are yellow, mushy and foamy. We quickly find out that instead of forcing them to lay eggs, we force them to lay very quietly, forever. The "high pressure" we have on them consists of the amount of dirt we have on top of them; the higher the dirt, the higher the pressure.

As our hens are in bad condition, we try this cure and that, different feeds, etc., but the more variations we try the worse off our hens become. Now we read that it is all in the stock, and we come to the conclusion that our hens are poor stock or that they must be of the "beef type," since we never get any eggs from them.

We start out to find some good stock of the "egg type." We buy 1,000 hens, and there is no question about these being of good, healthy stock and excellent layers, because when we received them each hen was the picture of health and laying regularly. We are willing to pay a high price for these hens, as it is in the late fall—and eggs are high and the hens are through moulting. We start in to feed Ration No. 9 because some one told us that it was a good ration for laying hens. We are going to be on the safe side, and feed them about eight parts of mash to one of meat, but the hens drop off in their laying. Now we try to force them to lay. We add beef-scrap, using six parts of mash to one of meat. We get a few more eggs at first, but if there were a few weak hens among them these weak hens gradually become weaker and die. We now see we are using too much meat, and we cut it down, using ten parts of mash to one of meat. In about a week or so the hens begin to stop laying, and we notice feathers on the dropping-boards. A few days later the feathers of the neck begin to thin out and we notice new feathers growing in. Now we know that our hens are moulting, and we think the man

who sold them to us did not tell us the truth. The fact of the matter is, we have made the hens moult the second time by changing from a ration high in protein to one low in protein. On many poultry farms hens are kept continually moulting for four or five months by wrong feeding.

After a short time our hens become weak, and we think the hens we bought were not of very good stock after all and we buy no more hens or chicks from the same man. The fact is we ruined the flock by wrong feeding, which will turn the finest kind of hens into poor hens. Do not blame the stock when the feed is at fault.

We will say that you started in feeding Ration No. 9. Your hens show watery droppings, and start to eat grit, etc. You do not know what to do. Knowing that middlings and flour are constipating, you add these. But they will not stop the trouble; sometimes they make it worse and produce white-diarrhoea. Then we add a little bran and it does not work well. Now we add oats and that seems to make them worse. We read where Conboie says "if hens eat grit or want corn very badly, give them plenty of corn." We cut out the wheat and give them nothing but corn for grain. They are very eager for it, but here the hens are misled, for the craving is caused by the meat, or they have indigestion, and we find that the more oats and corn we give them the worse off they will be. We come to the conclusion, therefore, that corn is not good for poultry.

It is instances like this that cause people to form an opinion of a grain and hold it forever afterwards. But the trouble is that the grain was used when conditions were such that the worst results would be obtained. When hens have watery droppings that are very slimy and of a grayish-white or creamy color, oats are very bad, nor should corn in excess of what is in Ration No. 7 be used. When hens

have real white-diarrhoea, corn is the worst thing that can be fed to them. When hens have very watery droppings a ration like No. 14, in which Turkey Red bran is used, will sometimes stop the trouble. In extreme cases use Ration No. 11.

It is very hard to find the trouble, as it can be caused by a laxative bran, laxative wheat, middlings, (especially flour middlings) oats, poor corn, cabbage or green food, or it may be a simple case of indigestion.

It is better to know what effect different grains have on the hens under different conditions than to know any receipt, as the variations in grains, outside conditions, and conditions of flocks may require the slight changing of a ration.

If we notice the hens closely at times we find that some of them are constipated, but after a short time their droppings become watery, and we think they need drugs. What they actually want is to be cured of indigestion by a system of feeding. When everything is right you can use Ration No. 9 and get a large number of eggs.

When feeding hens or chickens, wheat can be used for grain, instead of wheat and corn, if there is no bowel-trouble; but better results can usually be obtained by using wheat and corn for grain. Many people starting into the poultry business know nothing about these troubles, which they must meet and overcome. They start in the business blindly, without anything to guide them. They never learn, because when hens are out of condition certain grains will kill them, whereas if they are in good condition these grains would keep them in the best of health.

By keeping your ration very close to No. 14 or No. 9, and not varying it over one-half a part or so at a time, you can make little changes in the ration without causing the hen to stop laying. The right way to change the food is to sepa-



Inside view of laying house, showing roosts, dropping boards, etc.

rate the layers from the non-layers, and you can make the non-layers lay without affecting the layers. If part of your flock should have bowel-trouble, you will generally find that it is the weaker or non-laying hens. By separating the non-layers and by making the proper change in the ration, you will put them in good condition.

If your hens have white-diarrhoea feed them the following ration:

RATION NO. 11

2 parts coarse Turkey Red bran,
1 part Ration No. 14,
5% beef-scrap,
Wheat only for grain.

If a sudden change is made to this ration from a heavy ration like No. 9 or No. 10 in the fall or early spring it will cause some of the hens to moult. But a slight moult is better than a lot of dead hens.

Hens suffering from white-diarrhoea will not eat corn after a short time if other grains are to be had. Watch them carefully when they have this trouble and give them wheat and corn, and you will find that in a short time they will refuse the corn and go after the wheat, that is providing the rations is not too heavily balanced with protein, in which case the hen may go after the corn in spite of her trouble.

Hens fed on Ration No. 10 are liable to white-diarrhoea if the corn is not good and with some brans and middlings and conditions of hens.

Bowel-trouble is caused by the ingredients in the food being of the wrong kind and is the worst enemy you have to contend with. You will not have very much bowel-trouble using Rations 9 and 14.

Of the one thousand pullets I had in the oak grove, not one of them had bowel-trouble. They had no medicine of any kind and they were confined in a very small space and had no food but what I gave them. When they were pullets they were fed on the S— Method, except that they had a straight wheat ration for grain, and at night they were fed all the wheat they could eat. The B., B. & B. used contained one-half bone meal.

In making up rations measure the parts carefully, and these rations are mixed to measure, not weighed.

The percentage of beef-scrap in these rations is about right if 5 quarts of grain a day is fed to 100 hens, but as this may not be the better method and more grain is fed the beef-scrap should be increased. The grain should be thrown on top of the litter. Shavings from 12 to 18 inches deep is very good.

Feed the grain about 8 A. M. and 4 P. M. if feeding 5 quarts to 100 hens.

Use alfalfa or clover, etc., for green feed if possible.

When hens and chicks are suffering from white-diarrhoea, etc., I believe best results will be obtained by leaving out the green feed, for a while at least.

In running some of these experiments you may not get exactly the same results as I have described: You may have conditions that I have not had. Be very careful in your feeding and in changing the feed. You may think that a little change will not have any effect on the hen, but it does; a change however small has its effect. That is why so many people fail; they do not see these "little things," which are the most important of all. They stay in the same old rut as long as they are in the poultry business. We can all see the big things, but very few of us have the patience to hunt out the small ones, because they are very hard to find.

Many people use the hard Turkey Red wheat and pay more for it because it contains more protein. They also use the heavy bran.

In buying corn-meal, be sure it is old whole corn, ground very fine, and not meal sifted from cracked corn, which is lighter in color, but I have seen it made yellow by grinding and mixing with it the yellow hulls.

In buying shorts, see that what you get is shorts and not fine ground bran.

Try to get the same kind of grains and mill feeds all the time.

Hens sometimes get very fat on a ration in which a great deal of corn and meat is used if the bran is low in protein and the middlings very rich, or when much low-grade flour is used. It is generally one of these things that causes hens to lay soft-shelled eggs.

Hens often go after one thing eagerly at first and then change. They crave something to balance their ration at first, and go after it greedily, but this over-balances their ration and they quickly get tired of it.

A sudden change from a heavy ration like No. 9 to a light ration like No. 4, or from a ration high in protein like No. 9 to a ration low in protein like No. 1 is very apt to cause a moult in the fall or winter.

When hens are fed a ration of bran, middlings, beef-scrap and wheat when there is much bowel-trouble, if the ration is over-balanced with meat it creates an intense craving for something that will balance this, just as there may be a craving in your stomach caused by your eating continuously a ration that does not balance.

If the hen cannot find a food to balance her ration, she will eat dirt, grit, glass, granulated bone and charcoal in quantities, just as a healthy hen will eat grain. Under such

conditions if it is corn or wheat she needs and she is given all she wants of these grains, the craving will stop and she will eat no more dirt.

You must be very careful in feeding new corn, as new corn when ground spoils very quickly.

In experimenting you must use hens that know the value of corn as well as wheat. If they do not, you must give them time to learn or you will not learn anything from them. I have had some hens in flocks go for two months without eating corn, as they did not know what it was. But as soon as they did know they would fight for it.

Be sure always to keep grit of the proper size, shells, granulated bone-meal and charcoal in boxes. The hens prefer the coarse granulated charcoal.

Use corn-meal ground very fine and from good whole yellow corn. The beef-scrap should be the best and ground very fine. Use Russian Red wheat and good whole yellow corn. Mix these two grains together carefully and use them for almost all the grain feeds (equal parts of wheat and whole yellow corn) when limiting the grain.

The cracked corn is probably better, as all the hens get an equal share, but if care is used in scattering the corn, the 10c per hundred that the mills charge for cracking it can be saved.

At some places poultrymen prefer the Turkey Red wheat, as it contains more protein, and they pay a larger price for it. They prefer the heavy brans that contain a large amount of flour, but I have had very good results with Russian Red wheat.

In feeding you have different climates to be taken into consideration, different waters, different soils, a very great difference in the conditions of flocks—all of which things have more or less effect on the feeding.

One great trouble with the poultry business is that the successes are pointed out, and the failures are allowed to pass unmentioned, but I believe that the failures are as important as the successes. You want to know why this man failed and why the other man failed, but you will never see in any poultry book an account of such failures.

In many localities you will hear it said that the hens are deteriorating and that they need new blood, but the fact is that by wrong feeding and constant bowel-trouble the hens are gradually weakened and killed. There is nothing the matter with the hens; the trouble is in the feed.

It is generally believed that any one can feed poultry, and millions of dollars are lost yearly through that mistaken belief.

An improperly balanced ration causes bowel-trouble or creates a craving, which if not satisfied will cause serious results, as will also many combinations of food. I have fed laying hens on chick-food for quite a while and they laid very well on it, as some chick-foods contain enough protein to keep a hen laying.

A mistake in not balancing a ration for hens may not always result in serious trouble, but a mistake in not properly balancing the ration for chicks either proves fatal or so injures the chick that they are set back and sometimes never amount to anything.

Baby chicks that develop leg weakness are victims of an unbalanced ration and over-feeding. The knowledge you gain from experimenting with hens is very valuable in raising baby chicks.

I have given ten rations for making hens lay, and could go on indefinitely giving ration after ration, all of which I have used with more or less success, providing I used the right grains—the right grade of those grains—and the right

amount of grains. Grains should be used according to their laxative and constipating qualities. Brans from the same wheat may vary a little in their laxative qualities. Brans from some grains are laxative, while brans from others are not. Middlings are constipating—some far more than others—and differ much more than brans. Some middlings, like some brans, are not as good for fowls as others. Grade No. 2 of middlings are often nothing but shorts, and flour middlings often produce watery droppings. Always use middlings No. 1 that are not shorts or flour. If you use shorts, buy them; but do not pay middling prices for them.

To make hens lay, the ration should be accurately balanced with protein, which is supplied with either meat or milk. A rich food, such as corn must be supplied, for it must be remembered that the richest part of the wheat (the flour) is not contained in the bran and middlings. Corn is a heavy constipating food when the very best grade is used, but when the best grade is not used it produces bowel-trouble, watery droppings and white-diarrhoea. The best grade of whole yellow corn is the best poultry food, regardless of the season of the year. When it is not of the best grade, or where corn-meal is used that is sifted from cracked corn, it kills more chicks and causes more bowel-trouble among hens than all other causes combined.

Oats are always classed as laxative, for they often cause the droppings to become watery, and if a large amount are fed to chicks they will occasionally cause a watery or pasty dropping similar to white-diarrhoea. My experience with oats and middlings is that they are constipating, but when used under some conditions they are laxative. Use the large, heavy white oats; light oats that are nothing but hulls are worthless. These statements are made to show you that you must use the greatest care in selecting your mill feeds—

especially corn and middlings—as almost everything, from bran to flour, is sold as middlings.

I feed poultry of all ages about the same ration, except the first few weeks I do not feed baby chicks any meat because if the mash should not be exactly right, they will be better off without meat. I have raised fine, healthy chicks that never tasted meat for the first two months. The earlier they get meat the faster they grow.

I will use baby chicks for illustration—as they are the most sensitive to proper or improper feeds, and we get quicker results one way or the other. I will begin by feeding baby chicks chick-foods composed of seeds and grains. These chicks are in good condition, and the chick food is the best that money can buy. I feed these chicks five times a day in fine chopped straw, (I use coarse planer shavings in the yards) and to be sure that they all get enough I give them all that I **think** they will eat up quickly. Here is where I make a mistake whereby I kill my chicks because I **think** I have fed the right amount, and no two persons think in the same quality. At the next feeding time the chicks are hungry and I feed about twice the amount I gave before and keep that up. Next day my chicks do not seem to be so active and about the fourth day they begin looking weak, many of them so weak on their legs that they cannot stand up. About the fifth day half of them die, and the remainder die in a few days. At one place I lost five hatches of chicks, 1,000 chicks to each hatch, making a total of 5,000 chicks in all and near me on another place, another party lost 23,000 chicks in the same way.

My chicks nearly all died on the fifth day, and I thought they were poisoned because little stools of blood were passed; but what really killed them was over-feeding with grains. They ate more than they could digest, some of the food

souring before digesting. An intense craving for something developed, the chicks ate a large amount of sharp, fine grit—exactly as a hen might—and this cut their bowels and caused the passing of blood. Chicks will eat dirt, sawdust and anything they can get under such conditions, and eating sawdust has caused the loss of many a flock of chicks without the owner ever discovering the cause.

A good chick-feed fed by an experienced poultryman, who understands how to feed it, is a very good method of feeding baby chicks. Many poultrymen never acquire the knack of this, as they either starve the chick or over-feed them and ruin the chicks' digestion. When this is done it is very hard to get the chicks in condition again. It is very unwise to starve them; they must have enough to eat, but they must be hungry. They must be fed enough chick-feed so that they are satisfied, but not so much as to keep them from being hungry at the next feeding time. Remember this is no starvation method, and you do not have to be so particular when the chicks' digestion is good.

The chick-feed must be of the best quality, an inferior quality will kill them quickly.

Knowing how difficult it is for some persons to feed the right amount of chick-feed to chicks, we will now start a second lot of chicks on a mash and use the same chick-feed we used before. As bran is used a good deal in feeding chicks, we compose our mash of six parts of bran (Bluestem), one part of corn-meal, one-half part of middlings and one-half part of fine ground oats. We keep this mash before the chicks at all times. We feed a small quantity of chick-feed five times a day. Our chicks do fairly well for a time, but bowel-trouble develops among them, and we lose a few each day. As we have no certain rule to go by in feeding the grain chick-feed, we increase the amount a little each day,

but where we feed plenty, we notice that the chicks do not look so well on the following day. Knowing that hens on a well-balanced ration, when fed five quarts of grain a day to 100 hens, will eat four times this amount of mash, we now feed our chicks four times this amount of mash as grain chick-feed. Feed about this amount provided the mash is right and they eat lots of it. As our chicks have bowel-trouble on the food where we are feeding three parts of bran (Bluestem) to one of the other ingredients, we have to change the mash. We have noticed that the chicks seem very fond of bran and eat it out of the mash. Believing that chicks should know what they want, we now double the amount of bran in the mash, using 12 parts of bran (Bluestem), 1 part of corn-meal, $\frac{1}{2}$ part of middlings, $\frac{1}{2}$ part of oats. The chicks get no better and in fact the bowel-trouble becomes worse.

Remembering from past experiences that a ration composed of equal parts of bran, corn-meal and middlings sometimes stop chicks from dying, we now feed this ration and we lose less chicks, the bowel-trouble, however, continues, though decreased. Seeing this and remembering the principle of feeding—that bran is a laxative and middlings constipating—and desiring to tighten the bowels a little more I feed them the following ration:

RATION NO. 12

- 1 part bran (Bluestem),
- 2 parts middlings No. 1 (Bluestem),
- 1 part whole yellow corn, ground very fine,
- 10% charcoal,
- 1% salt.

Feed about four times as much mash as chick-feed if chicks eat the mash freely.

Ration No. 13 is used far more extensively by a large number of poultrymen than Ration No. 12. With some grades of grain either of them will give satisfaction, but with other grades neither of them will give good results.

RATION NO. 13

1 part bran,
1 part shorts,
1 part middlings,
1 part corn-meal,
10% charcoal.

Feed the mash dry and feed about four parts of mash to one of chick-feed. Feed the grain chick-feed in fine chopped straw three times a day.

When changing to this food when other grains have been used the droppings become stiffer, the chicks' eyes brighten, they become more active and the bowel-trouble decreases rapidly. If the grains are not right the chicks will get worse instead of better, the bowel-trouble will increase and the chicks will remain in the brooder or on the roosts.

To see if one-third corn in the mash would be better than one-fourth corn I increase the corn, in Ration No. 12 and feed four parts middlings, three parts of corn-meal and two parts of bran (Bluestem). When this feed is fed the chicks do not care for the grain chick-feed, they become less active, bowel-trouble appears, and the baby chicks become so weak that they fall over and do not have strength enough to get up. This is caused by indigestion, which is the result of feeding an unbalanced ration.

Buying bran and middlings at random from the grocery store will never do, for you do not know what you are getting. You must get the right kind.

I now try Turkey Red shorts with the Bluestem bran, two parts of shorts to one of bran and one of corn-meal and the chicks die on this mixture. When I change back again to Ration No. 12 I notice that the chicks begin moulting. Many poultrymen keep their chicks moulting continuously by wrong feeding. This is the result of changing from a heavy ration, like No. 12, to a lighter ration of bran and shorts.

Shorts mixed with a little middlings are often sold as middlings. Herein lies one of your troubles. You must be a judge of grains and feeds. See that your middlings are middlings and not chiefly shorts.

Turkey Red bran being non-laxative, will give you better results than a laxative bran in many cases. By simply changing to this bran the desired results will often be accomplished. Turkey Red bran without any corn or middlings used with it will cause a stiff dropping. But bran is not a very nourishing food by itself. Chicks and hens need a rich ration and grow much faster and lay more eggs on such a ration. If your chicks are in very good condition and you have green feed such as alfalfa, begin to feed it after the chicks are a week or so old. Some of the chicks are three days old when taken from the incubator, but the yolk of the egg furnishes them with nourishment until they are strong.

Be sure the chicks always have plenty of water before them at any age.

Trouble is likely to develop on Ration No. 12 or 13 or any of the other rations on account of the quality of grain used and to find the cause of this trouble is one of the most difficult of tasks. This is the most important part in the science of poultry feeding.

If you are troubled with chicks or hens with watery droppings or real white-diarrhoea, the following illustrations will show you how to stop this immediately. We will say that

our chicks develop very bad bowel-trouble of the watery kind and begin to die. We immediately begin to change the bran and middlings and use every mixture we can think of, but no change we make does them any good. The more middlings we use now the more laxative the droppings become. We feed Turkey Red bran and middlings in the mash and this does not help. We cut out the mash and feed nothing but chick-feed, but this does not work. Now we feed nothing but dry bran with a very small amount of chick-food, but this proves disastrous, for a large number die from lack of nourishment. We now go back to Ration No. 12, and we notice that the chicks pick the bran out of the mash, and yet when we fed the bran with a small amount of chick-food they died rapidly. It seems as though the chick is trying to tell us what it wants, but we cannot understand it. At last the idea comes to us that there is something in the mash it wants and something it does not want, what is it? We cut out the corn and leave only bran and middlings, but the chick does not eat much of the mash. Then we cut out middlings and feed two parts of bran to one of corn, and the chick will eat this ration quickly. Now we see exactly what that chick wanted, it was after the corn, it is not fond of a large amount of dry bran, but it would eat it in preference to the middlings and corn that were causing the trouble.

Instead of getting better, the more corn the chick now gets the worse its condition becomes, and we reach the conclusion that the chick does not know what is best for it. We now give a ration of four parts of bran to one of corn-meal, from poor corn, and put down in front of them Russian Red wheat and cracked corn. As the droppings were bad and watery we now bring about pure white-diarrhoea in many of the chicks in a couple of days with this combination of foods. This is not a very good ration to produce

white-diarrhoea, as it contains too much bran. More corn and middlings would be much better. This is the disease that kills millions of chicks annually. This is the disease of which learned experts say, in order to prevent it, to wash your eggs in a solution and spray the incubators in order to kill the germ. The truth is that this disease is caused by a poor grade of corn, too much corn, or a combination of corn and mill-feeds and there are many other combinations of food that cause it. Many people are advertising drugs to cure this disease, and are making money through cleverly-worded advertisements. Through clever advertising the manufacturers of a certain incubator built up one of the largest businesses in America and the main point to which they invited attention, was the biggest kind of a fraud. But it was done so cleverly that 90% of the users of these machines have never discovered this yet.

I have shown you how to produce white-diarrhoea, but you must remember the conditions—indigestion, watery droppings and plenty of corn, and corn-meal of poor grade and a combination such as I have given you. If you tried this with chicks in good condition you may not get this result and if you tried this with a very good grade of corn and corn-meal it may not occur, although I believe it will under those conditions with any grade of corn. With a good mash you can sometimes put down in front of chicks all the corn and wheat they will eat without harming them.

Good wheat, corn and oats are to a chick what good milk is to a baby. Poor corn is death to chicks, poor milk is death to babies. You may fool a baby with poor milk and you can fool the baby chick with poor corn, but fool their digestive organs—never. Babies have no commercial value, but baby chicks have. They are worth about ten cents each. Remember feed them good corn.

It is far more important to prevent white-diarrhoea than it is to cure it, because when a chick has this disease very badly it cannot eat anything and will die in a day or two.

It seems to me ridiculous to continue feeding a feed that is causing the trouble and try to cure this disease with a little "dope." Remove the cause instantly and by a scientific system of feeding restore the chick to health.

White-diarrhoea is one of the worst diseases that poultry is subjected to.

As I have shown you how to produce it I will show you how to cure it. Feed a mash composed of two parts of bran (Turkey Red) to one part of Ration No. 14. Feed this for two or three days and then gradually leave out the bran. Feed cracked wheat for the first two days and then leave out the wheat and use chick-feed. Do not over-feed the chick-feed, as this might cause the trouble to appear again. Feed no green feed for the first few days.

Stop this trouble with the bran and wheat and then return to the richer ration.

What caused our trouble in the first place was a poor grade of corn, or corn and bran. It is very hard to get the best grade of whole corn ground into a fine meal. Most all corn-meal sold for poultry food is corn sifted from cracked corn and contains most of the inside of the corn, this spoils quickly and is often deadly to chicks and hens, as are also the poorer grades of corn. I have fed hens, having good digestion, two parts of Turkey Red bran to one of corn-meal and also one part of bran to one of corn-meal with wheat and corn before them at all times, and they were in the best of health. This method would prove fatal with a poor grade of corn or where hens had poor digestion, or with some brans.

Chicks or hens may eat too much corn at first, when the droppings are very watery, or they have indigestion and it may result seriously. Do not waste time trying to find something to take the place of corn and corn-meal, and do not waste time trying to feed the mash without corn-meal.

Good corn-meal is worth twice the price you are paying for it, but it only costs \$1.00 or so more per ton. Baby chicks and all poultry are very fond of corn, but they are very poor judges of the quality you feed them, and will eat it regardless of how good it is. If it is good it is very good for them, but if it is bad it often kills them.

The more I feed poultry the more I am convinced that they know more about feeding themselves than I do. The only thing is that, when they are confined, and the grains we give them are of poor quality it is hard to understand their needs. The chick will leave other grains and eat corn, but it will leave corn instantly and fight for an angle worm. I have raised 97% of chicks that grew very fast on Rations Nos. 12 and 13, but you can lose them very rapidly on these rations with a poor grade of corn-meal and with some mill-feeds.

Hens should be given a limited amount of grain; when fed all the grain they can eat, they are apt to over-eat to such an extent that some of the grain will sour before digesting. Chicks do the same thing. This can be avoided by feeding plenty of mash first and then following with all the grain they can eat. The grain can then be left before them at all times without danger. If the hens have very watery droppings these can be stopped by using Ration No. 11, after which a heavier ration should be used.

If you will find out what is the best grade of corn (the hard, large, fully matured yellow grains, with little white on the ends, not the little round undeveloped grains that

are often soft in the center and sometimes having more white on the ends) and use nothing but this grade of whole corn, ground fine, you will avoid the worst pitfall in poultry feeding.

When feeding chicks on Ration No. 13 about 5% of meat should be added when the chicks are about two months old. At the age of three weeks mix equal parts of wheat and corn to the chick-feed and at the end of four weeks it will not be necessary to feed any more chick-feed.

INDIGESTION

Under this heading most of the bowel-troubles can be classified. It is principally caused by eating improper and unnatural foods. Just what effect exercise has on indigestion I do not know, but I do know that no amount of exercise will cure it. Neither will a starvation method do any good.

When hens are troubled with indigestion and are given a heavy feeding of anything whether it is bran, middlings, meat or green feed or grain, it is noticeable that on the following day more bowel-trouble will be noticed than usual. This seems to prove that over-feeding is the cause of this, yet you can take a large flock of chicks that are fed on a mash that is not properly balanced and which have indigestion and bowel-trouble, and by leaving out the mash, feeding them chick-feed of a good grade, little bowel-trouble will be noticed on the day following. This shows that it is largely caused by an unbalanced ration.

If chick-feed is fed for a long period the chicks may begin to eat dirt on account of something left out of the food, but this is sometimes caused by over-feeding the chick-feed.



Breeding pens used exclusively for breeding prize pigeons.

Chicks grow very much faster if a dry mash is kept before them all the time, providing the ingredients in the mash are right, and the more they eat the faster they grow.

This method proves far more satisfactory than any other method that can be used, but at other times when a ration like No. 12 or 13 is used it is a failure on account of the chicks getting indigestion.

With some chicks and flocks of hens I have had they would not be hungry at feeding time and many of them would remain on the roost. They all had indigestion or bowel-trouble and it was very hard to stop it with a ration like No. 12 or 13. In raising chicks I have had the same thing happen. The chicks would be growing very fast on Ration No. 12 or 13 and many similar rations, but on getting another shipment of bran, corn or middlings from the mill, or from some other cause, they would get bowel-trouble or indigestion and die in spite of everything I could do to save them. They would remain on the roost most of the time and occasionally get off to get a little mash. Many of them would not eat chicks-feed or grain. This is often caused by the variation in brans, middlings or by the quality of the corn.

If you should at any time have a similar experience you can stop these chicks from dying and get them in condition by feeding my system.

The methods given here for raising baby chicks are used by more successful poultrymen than any other methods, although they do not limit the chick-feed to any certain amount of mash.

In raising baby chicks, with some grades of feeds Ration No. 12 or 13 can be left before them at all times and if four parts of mash is given to one of chick-feed they will grow very fast without meat. With many grades of corn and mill-

feeds, bowel-trouble and indigestion will develop and it is impossible to continue this method.

The second method is to feed the chicks on chick-feed for the first week and then give them a little mash two or three times a day and gradually increase the amount of mash each day. This is a good method, but trouble will be met with just as soon as the mash is fed if the grains are not right.

The secret in feeding chick-feed, is to feed them plenty but not to over-feed so that they will not be hungry at the next feeding time. Feed chicks five or six times a day for the first week. If they are not hungry miss a feed, but if they are at any time very hungry feed them immediately. Never let a hungry chicken roost on your poultry farm. Do not feed them if they are not hungry. When chicks are very hungry you know they have cleaned up the feed and that prevents some chicks from picking out favored grains and unbalancing the ration for others. This is especially important if chicks have a little indigestion, as it causes bowel-trouble. Go by their actions always. If they are hungry feed enough, if they are not hungry feed less. They will not eat some chick-feeds up cleanly and in such a case change your chick-feed. Do not feed a large amount one time and a small amount the next time. You must watch them very carefully, as it takes years to learn to raise chicks successfully.

The ingredients contained in chick-feeds are no secret and you can mix them yourself if you wish, but it is not worth while unless you are feeding on a very large scale. It is not easy for you to get the good quality of grains that some manufacturers put in their chick-feeds and this is very important, for if you once get your chicks in bad condition it is very hard to get them going right again.

With a good chick-feed properly fed there should be very little bowel-trouble, but if you do not feed it carefully they may all get bowel-trouble, but they will also do the same by any other method of feeding.

When chicks are three or four weeks old mix equal parts of wheat and corn to the chick-feed.

Many poultrymen think that meat is not good for hens, as it is observed that when hens have indigestion and a large quantity of meat is fed there will be more bowel-trouble on the following day, but this will also occur without meat by giving a heavy feeding of green feed or mash or grain. One of the most important feeds is meat. When hens are fed very heavy and are troubled with indigestion, bowel-trouble, etc., adding a large amount of meat to the mash seems to turn the hen inside out and causes a large amount of bowel-trouble. Poultrymen then form the opinion that meat is not good for poultry, but this is a mistake. The poultryman noticing the undigested food which is thrown off in the form of bowel-trouble, thinks that meat is not good for hens and tries to do without it. He is now on the wrong road and may never find his way back. If the mash causes bowel-trouble when there is no meat used in it this proves that the meat is not causing the trouble and if you will cut out the meat you can easily tell if this is the cause of your trouble. You will find that your mill-feeds are usually at fault. The lack of meat is often the reason of poor results being obtained.

Bone meal is very good if placed in the mash, but with some rations it causes watery droppings and when hens have indigestion very bad, green bone acts like meat.

On account of the many different kinds of beef-scrap, etc., and the many variations in grains and conditions of hens the only sure way to balance a ration with meat is to take

five pens of five hens each and feed each pen one part more meat than the other pen and in that manner you will get the right balance. Begin with about 5%. When a heavy ration is being used the meat should be balanced to within one-half part of mash. It is not necessary to be so particular with a light ration.

Have the feed boxes large, as they do not like to eat out of small boxes.

There are many peculiar things in feeding bran, corn and middlings to poultry. You can feed wheat, corn and oats and if it is fed properly you can get fairly good results, but just as soon as you put a little corn in bran or middlings, or use bran or shorts or middlings you are liable to get into difficulties. You can take a mixture of these feeds and get very good results and the next time you try it you get into trouble, although you use the same mixture you used before and feed it in the same way and while the conditions of the hens are in a measure responsible for this, the main reason will be found in the variations of grains and mill-feeds. One, two or three parts of bran, or bran combined with shorts and middlings, to one part of corn-meal fed to chicks or hens as a mash and wheat or wheat and corn for grain should not make hens sick, but it sometimes will, even though the hen is in good condition and the grains are the best. Sometimes you can feed two parts of a non-laxative bran to one of corn-meal and get very good results; in fact, this seems to be a very good ration, but at another time you cannot feed such a ration, as your hens will get sick and a large amount of bowel-trouble will be noticed. It makes little difference what method of feeding you use, or whether you feed wet or dry, as it is the ingredients in the food that count. You can feed them to the point of starvation and not cure them of indigestion if the grains are not right, but

you can feed them all they can possibly eat of the right food and cure them. A ration without one-fourth corn is a very poor ration. There are some kinds of feeds that cause a large white dropping free from bowel-trouble, but I do not know what they are.

Every ration I have given and hundreds of similar rations will cause trouble. Bran and corn are the principal feeds that you must watch, for there are many variations to the qualities of corn. By eating a little corn-meal you will notice that it is sweet and wholesome, while other grades will leave a bitter taste in your mouth.

The reason that you get varying results from the same ration and the reason I have had trouble with these rations at different times is on account of the mill-feeds varying. With a good grade of corn and some grades of brans you can feed Rations Nos. 1, 7, 9, 10, 12 and 13 and get good results, but unless you have these grades you will have trouble and your chicks will die and your hens also. There is the reason so many people meet with failure. You get a receipt that call for a large amount of corn; you use it one time and get good results but the next time your chicks die and your hens get bowel-trouble. The reason you can feed, say Ration No. 13, for instance, and raise 95% of your chicks is that your bran, middlings and corn are of the right grade. Your chicks all live and grow very fast, but next time your grains are not the same, bowel-trouble results, the chick gets no nourishment from the food, they get weak, thin and die. You will get the same result from every ration under those conditions. With some grades of corn your hens will get grayish white droppings, etc., and your chicks get dumpy, stand around and the only parts of them that grow is the upper bill, breast bone and the wings. These hang down and some foolish people cut them off. Feed

those same chicks the right food and in a few days they will begin to grow and come to life. The same thing occurs with a flock of hens. They change from sickly hens that you are ashamed of to a vigorous, healthy flock that lays and pays and a flock that you are proud of.

On examining some corn it may appear good, but if you will grind it up fine and eat a little you will find that it will leave a bitter taste in your mouth and on feeding it to chicks they will not do good.

You can use some grades of corn-meal made especially for table use and get good results feeding it to chicks, but other grades of table corn-meal, although it is nice and yellow, not bitter, it seems to be flat in flavor and may produce the grayish white droppings when fed to chicks and hens from which many die. It must be responsible for a large amount of disease in the human family, for a food that kills chicks must not be very good for humans. If you cannot get a good grade of old corn, get a good grade of corn grits, as they are the very best grade of corn, grind them fine and use them. Test corn by its appearance, the flavor, but the best test is the chicks' digestive organs. Man has never yet fooled those. With some grades of mill-feeds and corn you can feed most any ration successfully, but with most feeds you cannot do so, as you chicks or hens will die. When you see a receipt given out similar to those given you, you can make up your mind that 90% of the users of those receipts are going to have trouble feeding them, because they do not know how greatly grains vary.

I have used many hundred similar receipts, having good success one time and securing poor results the next. If you are having success with similar rations be sure you know exactly the kind and grades of those grains and stick to them. If your ration is right feed the same thing always, never

change, because the change you make is very liable to prove disastrous.

If you have been using any of these rations, or any ration, and do not thoroughly understand how greatly grains vary you may give the credit for your success entirely to luck, there has been no science to it. If you do not know what kind of corn or bran to get; if you do not know shorts from fine ground bran, or if you do not know what a good grade of middlings are; if you cannot tell middlings from flour middlings or middlings that are three-fourths shorts and you are getting good results you can consider yourself very lucky. But as sure as you remain in the poultry business without learning these things so that you cannot be fooled you are always in danger of landing on the rock of failure.

Middlings No. 1 that are not flour middlings, or shorts, from either Bluestem or Turkey Red wheats have give me very good results.

You will notice that the more bran you feed to a hen or chick the greater the craving they have for corn, and if you feed two or three parts of bran to one of other ingredients they will eat nothing but corn if they can get it.

Corn grits, which are the best grade of cracked corn, should always be fed to chicks as a grain.

Ration No. 10, especially where a little flour is fed with it, is much more fattening than Ration No. 9, although there is less corn used. It is rations similar to this that causes flocks of hens to become very fat and they are liable to be classed as beef-type hens when the food is entirely the cause of this.

Chicks grow very fast on Ration No. 14 if the grains are right, but you should use coarse bran, Turkey Red preferred, and middlings, either Turkey Red or Bluestem, that are not shorts or flour middlings, and good corn.

I have often found it impossible to get good results from hens by using Ration Nos. 7, 9, 10, etc., and would sometimes lose all my chicks on Ration Nos. 12 and 13. If you will use the quality and kind of grains and mill-feeds given in the following ration and feed it the way given here, you should be able to raise every healthy chick, and they will grow very fast. If you are not able to get good grains, it will be better for you to buy a good chick-feed and mash already mixed. While this may not be as good a laying ration as No. 9 you will find it more reliable to use in many cases, and when the hens are in good condition it is very easy to blend this ration into No. 9.

If you use miscellaneous wheats, brans, middlings, corn, etc., especially if hens are in poor condition, you will get into all kinds of trouble just as you will get into trouble with any other receipt. Always demand the kind and grade of grains and mill-feeds used with every receipt given out, because, if you do not, you will eventually have trouble with it.

RATION NO. 14

(Conboie System of Feeding Chicks and Hens.)

2 parts very coarse Turkey Red bran,
1 part old whole yellow corn, ground fine,
 $\frac{1}{2}$ part No. 1 middlings, no short or flour middlings, Blue-stem or Turkey Red.
 $\frac{1}{2}$ part fine ground oats.

Feed this ration dry and keep it before hens and chicks of all ages all the time. When feeding baby chicks, feed chick-feed in litter three times a day and feed four times as much mash as chick-feed. This is important unless chicks are in very good condition—four times as much mash as chick-feed. After three weeks mix equal parts of cracked Turkey Red wheat and

NOTE.—Feed no oats in Ration No. 14 to baby chicks, as oats sometimes cause watery droppings inclining to white-diarrhoea. Feed no oats to fowls of any age if droppings are watery. If oats are ground very fine, use three parts of middlings to two parts of oats, but if not fine use half and half in Rations No. 9 and 14. When no oats are used use one part of middlings in Ration No. 9 and 14. Use no lumpy bran, middlings, etc., as it has been wet and spoiled. Baby chicks should not be fed more bran in Ration No. 14 except for a day or two. Two parts of middlings in this ration may not work well. If they bill out the bran or eat the corn and middlings and leave the bran, give equal parts of bran and middlings, keeping the corn at $\frac{1}{4}$ part. If they do not eat the mash when, say, two parts of middlings are used, use more bran and less middlings. Watch the chicks, they will tell you and when you get it right they will grow very fast. This is very important, for if this is not done the chicks will not eat much mash and gradually become weak. Treat hens the same as chicks.

I have a large flock of hens laying heavily on Ration No. 14. These hens had indigestion and would not lay on Ration No. 9, but came into fine condition just as soon as I fed them Ration No. 14. They are fed the exact grains given and they have no meat or added protein of any kind. Also a flock without meat or green food. Another flock doing better with equal parts of bran and middlings with $\frac{1}{4}$ corn and no meat. With the middlings I have I am getting the best results with chicks and hens by using equal parts of bran and middlings with $\frac{1}{4}$ part corn. This is due to grain variations.

wheat cracks better than Russian Red. After the first week feed granulated corn or corn grits to the chick-feed. Turkey Red the chicks plenty of green feed, also feed green feed to hens, as it saves from one-quarter to one-third of your feed bill and it puts color in the chicks' and hens' legs, etc.

Feed no meat to chicks. Never feed meat to chicks that have indigestion. If their digestion is good they can be fed meat at any time, but it is probably better to wait for four weeks or so before giving them any meat, then gradually add 5% of meat, but you must watch the droppings very closely to see if it causes bowel-trouble. If it causes yellow bowel-trouble do not use it. Try again a month or so later. If your hens are in good condition use about 5 to 8% of meat in this ration or use Ration No. 9. If your hens have indigestion do not use any meat in this mash, at first, because it will pass through the hen undigested and will be thrown off in the form of bowel-trouble and will do the hen more harm than good. I have had hens in this condition lay without meat where they could not be made to lay with meat, but you must be ready to add the meat when needed. The non-laying hens with indigestion cannot eat meat like the laying hen with good digestion.

Feed five quarts of grain a day to 100 hens—equal parts of Russian Red wheat and whole yellow corn, and there may be times when hens have some kinds of bowel-trouble that it would be better to feed equal parts of wheat, oats and corn.

Sometimes with a ration like No. 9 where one-third of corn-meal is used it cannot be fed to chicks or hens, as it makes them sick; now add three parts more bran to Ration No. 9 and you get Ration No. 14. After feeding Ration No. 14 for a few days the droppings should be stiff, brown in color and the end tipped with white. This is what you want. This is caused by the Turkey Red bran. Ration No. 9 sometimes

acts this way. Some brans cause large white droppings. It may be possible to use flour middlings in Ration No. 14, but I have never tried them.

Feed the hens having poor digestion two or three weeks without meat and note results. If they lay well, leave out the meat for a while, but if they do not lay and their digestion is good add about 5% of meat and watch the droppings very closely to see whether it causes bowel-trouble. If it does, then leave out the meat. Usually after a short time the droppings get stiff and the meat can then be gradually added without causing the droppings to "break" and better results will be obtained. If the droppings do not get stiff enough after a couple of weeks, feed equal parts of wheat, oats and corn for grain. Do not be in a hurry, because the bran is binding and it is far better to make the droppings stiff with bran than with oats. When everything is right hens will be very hungry on this system of feeding.

Ration Nos. 9 and 14 are the best rations given in this book and I advise you to use no other.

Feed no oat middlings with Ration No. 9 or 14, as they vary considerable and sometimes cause trouble. Heavy white oats (including the hulls) ground fine is what you want. You must watch ground oats very carefully as they often contain a large amount of wheat middlings. Get ground oats that are oats and nothing else.

If hens or chicks have bowel-trouble of any kind with Ration No. 9 it will be due entirely to not using the right kind or grades of grain. Use the same kind and grades of grain in Rations Nos. 9 and 14. Ration No. 9 is far better than Ration No. 14 or any other ration in this book. The trouble that I have had with it has been entirely due to not using the right kind and grades of grains. Ration No. 14 is safer for chicks than No. 9, as a poor grade of corn in No. 9 would cause leg weakness.

If you have any trouble with this ration, you will find that nine times out of ten it is due to the grade of corn. Stick to this ration (No. 9) as it is the best poultry food there is if you get the right kind and grade of grains, such as I have given. Sometimes the best possible results can be obtained from hens when they are in excellent condition by feeding $7\frac{1}{2}$ quarts of grain to 100 hens and use 6 parts of mash to one of meat.

If you cannot get good feeds for the mash and desire to feed grain chick-feed to chicks, for the first seven to ten days, feed a very good grade to chicks every two hours. Feed only what they will eat up clean. Feed nothing else. Do not be misled by them eagerly eating when you throw them the feed, as they will do this with food on the ground left over from last feeding time. They must eat it up clean, for if this is not done some chicks pick out favorite grains and unbalance the feed for the rest of the flock, and there is where all the trouble starts, there is where you ruin your flock and this is the most important point in raising baby chicks. They must be hungry—but you must not starve them. Learn that point and you can easily raise baby chicks. Feed no grain feed while feeding only baby chicks, as it will cause trouble with some chick-feeds, and it only adds that much more feed—and more chicks are killed by over-feeding chick-feeds than most any other cause.

The mash should be fed dry, as it does not do any good to dampen or cook it, as you are only wasting your time and will do more harm than good.

Feed no meat to baby chicks for the first four weeks and not any then if they have indigestion.

Give plenty of clean water to chicks and hens, always, and keep in front of them plenty of grits, bone, shells and charcoal. Fix feeders so chicks can not bill out bran.

Be very sure to give the chicks plenty of heat until they are fully feathered. If the brooder is too hot they will move outside, but if it is cold they will huddle together and sweat; this stunts their growth. Chicks are only babies and all babies need warmth. You save money by using plenty of heat by the chick growing very fast. Use no fireless brooders, as the chick needs a warm place and the moment you confine their heat they may sweat and this weakens them.

Some chick-feeds contain a large amount of oats, which cause a pasty white-diarrhoea when improperly fed and that is one reason you must not over-feed chick-feed.

Oats used in many rations are very constipating, although writers for poultry papers claim them to be laxative, but you will notice that they cause a small, tight dropping, but with some rations they cause watery droppings.

A hen's instinct is governed entirely by her cravings and when the ration is high in protein or laxative or where much bran is used she will eat corn in preference to wheat. There are wonderful things to be learned from the hen's instinct, but they are very hard to understand where we do not understand the variations in grains.

A hen may over-eat on corn where a very laxative ration is used just as it is possible for her to do on a ration that is very high in protein. In the future we will understand the cravings of the hen far better than we do today and may be able to take advantage of them.

It is very hard to give a method that will cover every condition and especially when some flocks are in a very bad condition.

The kind of grain fed with a ration should be used more on account of the constipating qualities and the amount of protein it contains than the season of the year.

Watch your hens and find out how to feed them and you will not kill them, but you are apt to ruin or kill the baby chick.

If your food is right, your chicks will be lively and want to scratch. If the food is not right, they will not scratch because they are sick, and when they are sick they want rest.

At some places the water is constipating and at others it is laxative. This sometimes requires a slight change in the ration.

A food that is a very fine egg food may not be good for a flock of hens in poor condition.

Experimenting on a few hens in good condition is an altogether different proposition from taking a large flock of hens in poor condition and bringing them to a healthy laying state.

It is wonderful how quickly a hen will respond to the right balance and combination in foods; how quick the comb will start to grow, the crust start to form, the eyes to brighten, and the general appearance of the hen to improve.

It is not drugs that are wanted, but the right foods.

You cannot force a hen to lay. Giving her a ration high in protein does not force her to lay, for if she has indigestion, or if you over-balance your ration with too much protein it stops her from laying.

Some mash foods contain 20% to 25% of beef-scrap, but with a high protein ration about equal parts of grain and mash are given.

It is nonsense for people who should know better to advise washing eggs in solution to kill the white-diarrhoea germ. White-diarrhoea comes from combinations of foods. At one time in my career I had 1,000 hens suffering from it and I have had large numbers at other times. Corn that is sour will produce the worst white-diarrhoea.

Use plenty of sand where the chicks can get it, but do not use sharp prepared grit at first.

It is a fact, as I have pointed out on another page, that hens eating some rations under different conditions, or having indigestion, will eat grit, charcoal, bones and glass in quantities, and will eat it in preference to grain. Chicks are the same way, so if your food is not properly balanced or your chicks have indigestion, do not rush for some white-diarrhoea cure or some other kind of a cure. Get down to the real cause, and when you find it and remedy it your troubles will cease.

Where five quarts of grain a day is fed to 100 hens, much more mash is eaten by the hens, and the ration does not contain as much protein.

The more grain fed and the less mash, the more meat should be placed in the mash.

The amount of beef-scrap given in these rations are about correct when using five quarts of grain to 100 hens.

If you use plenty of litter (coarse planer shavings are good, but do not use the fine as it gets in the chicks' or hens' eyes) in your house and yards the hens will keep this worked up, which will prevent the ground from becoming contaminated. A small yard which the hens keep worked up and cleaned is far better than a large yard where the droppings are allowed to pack. Hens and chicks often get dirt in their eyes which cause the head to swell and is often mistaken for roup, but this dirt will be found in the upper front part of the eye and can be removed.

When the right grains are used, the best grade of those grains, the right amount of those grains and balanced correctly every disease that poultry is subjected to through wrong feeding is prevented. When this is understood and your housing conditions are correct, your hens will lay, and

that is the only way to make them lay. Not only will chicks live and thrive, hens lay eggs, and disease be prevented by proper feeding with good grains, but by careful observing, and by using different grains when hens are out of condition and noting their good and bad effects you will learn the secrets of feeding, the secret of disease, and how these come and go in accordance with your use of the right kind and grades of grain. We see the utter folly of tonics, drugs, condiments, etc. We see why milk cows fluctuate in their milk on account of grain variations, and how when dairymen understand these variations, they will be able to obtain more milk from their cows, and prevent all fluctuation. Not only do we see these things, but we see the cause of disease in the human family, and how it will some day be prevented by the thorough understanding of the food problem and not by drugs.

THE CONBOIE METHOD OF SEPARATING CHICKS AT NIGHT

Four hovers are placed in the same room, and around the edge of each hover I use a different colored cloth. For the first two weeks boards keep each lot of chicks separated. At the end of this time these boards are removed and the chick, becoming accustomed to go into a hover of a certain color will prefer that hover to any other. By this method I prevent all the chicks from crowding into one hover and killing each other, and thereby overcome one of the most troublesome annoyances in the poultry business. The hovers should be placed close together the first night or two at the front of the raised platform and the feeding troughs should be placed in front of each hover. The first day after the boards are removed the chicks are lost and are likely to go into a favored corner at night, but by watching the first night and

by proper arranging the hovers (after the first night they should be placed at the back of the platform and placed close together) and feeders, this will be overcome, for when the chicks become accustomed to a hover of a certain color, it will go to that hover.

Toe picking at times becomes so bad that one becomes disgusted with the poultry business. I have tried putting everything imaginable on their toes without meeting with any great success.

Take a long box about four inches high with wire on top and place it half inside and half outside (have three of these if necessary) and keep the chicks in this for a day or so, then put pitch-pine on the toe and let the chick go. I have stopped the very worse cases of toe-picking by putting 1½% of salt in the mash, but this is too much salt to use constantly, as it makes the chick too thrifty. I have very little trouble with toe-picking by using a dry system of feeding. The feed has very much to do with this trouble and you will notice that the more poorly the food is acting the worse the toe-picking becomes. The brooding system also has its effect on toe-picking, depending whether the chicks have a good place to go under. Chicks are not very liable to pick toes if they have a large run. If chicks have a craving that salt will stop, it must be good for fowls of all ages and I advise using ½% of salt in all mashes regardless of the age of the fowl. But it is very hard to tell whether fowls require salt.

The foreign egg problem that you are now having to contend with is caused by the same means that is causing 95% of the failures in the poultry business (given on another page in this book) and can instantly be removed by the same method.

It is very hard to get reliable information about feeding poultry, for what one man will praise another will condemn.



Inside view of lattice yard of brooder house.

Each judges the grains, etc., under the particular experience and conditions which he has used these grains, and his conditions, and the condition of his hens at that time may have been such that he has been misled. Seldom does either know the real secret and it is all guess work.

But as I have pointed out, the secret is in the variations of grain, conditions of flocks, soils, water, etc.

I believe that I have described the exact conditions that exist in different flocks, the conditions under which certain grains are bad and often fatal.

By describing the actual conditions as I have found them, and as he will find them, I have given the reader information that will prove most valuable to him. I believe that by so doing I am removing from his pathway the rocks of failure so many poultrymen have stumbled over, and that this book will be of more benefit to him than all the other poultry literature combined. Here are explained the "little things" about which you have tried so hard to obtain information.

IV. HOUSING

Everyone thinks he knows all about feeding poultry, but those who are most advanced in this science know that they are only scratching on the surface of the subject. The same thing holds good in housing poultry. Everyone thinks he knows all there is to know about this subject, but housing is as highly specialized as feeding.

You will seldom find two poultry farms using the same kind of buildings. You will find that many know nothing about ventilation or planning a plant, and through inexperience and through not arranging their plants in the right way these farms are failures from the start.

We learn from experience. I have put in many plants, and the way I install them enables one man to care for several thousand hens more easily than he could a far smaller number by any other system.

I have the only draught-proof house in existence which supplies fresh air to fowls at all times and in any climate or location.

Boards and battens warp and shrink and leave cracks through which the winds enter and create draughts. Of course, they are cheap, but like all cheap things they come high in the end. It pays in the long run to put in good buildings and not cheap ones, whether they are my poultry buildings or some other.

I sell the plans for the buildings and also sell the buildings separate from the rest of my system. The lumber for my large poultry house to hold 1,000 hens costs about \$350.00, which includes tongue-and-groove lumber, ten skylights, and

boards cut to measure. While it could be made more cheaply with less expensive lumber, it would not be so good. Cheapness does not pay.

The skylights permit the sun to flood every part of the building, and sun is one of the greatest germ-destroyers known. The building is therefore always as light as day. In some locations, nothing but the best buildings can be used on account of the winds.

It is to be noticed that air currents differ in different localities. Aviators run into what are called air pockets, and many times one windmill will be run very fast while another not very far away will not run at all. In large cities it is noticeable that close to some buildings it is very draughty.

In some places almost any kind of a poultry house will do. They are either sheltered or out of the pathway of air currents. An open-air house just a few feet away may be in the pathway of whirling air currents or of the wind, which, striking the building at a particular angle, causes a suction which creates a draught.

Some houses are not draughty in summer, but are draughty in winter, and vice versa, because the wind comes from different directions in the different seasons and the air currents are different.

Food troubles and roup are the cause of 95% of those failures in the poultry business which are not caused by "the interests." They exceed all the other troubles which are of minor importance and which are not dealt with in this book. They can be avoided simply by the use of sanitary methods.

ROUP

I believe that I have had a wider and more varied experience with roup than any poultryman in California. I have been in some locations where roup did not cause much trou-

ble, but at one place I had 1,000 hens with roup at one time, losing 300 of them; at another location, 700 cases of roup, losing 200; at another, 500 cases, losing 100, and in many places I have had from 20 to 100 hens with roup. I have worked on many places, managed many farms and owned several, and the experience I have gained is embodied in this book and in my poultry system.

Roup results from catching cold. I do not know how contagious it is, if at all. If I said it was contagious I would only be repeating what I have read and at the same time advancing the interests of my own system.

The fact is that, after conducting a great many experiments, I do not know that it is contagious. A hen suffering from roup throws off a noxious odor, which must be bad for the health not only of other hens, but also of human beings. I am, therefore, very careful in my experiments not to subject myself for any length of time to the atmosphere of a place where there are roupy hens.

Take a building where there is not much ventilation and put in it a lot of roupy hens, and in hot weather the atmosphere is vile.

In the face of this fact, I do not know whether or not roup is contagious. No experiment that I have ever made has proved to me that it is.

I do not believe a roupy hen should run with well ones. I have had a flock of 1,000 hens, nearly all of which were suffering from roup, and I could not separate them very well and have had to let them run together.

Roup comes from cold, and most all colds that hens get come from draught. I know that a number of young chicks, huddling up together and sweating and cooling off quickly, will develop roup, but most all other cases of roup are caused by draughts.

A hen in her natural state—that is, out in the trees—if she roosts in a sheltered spot, seldom if ever has roup, because she is then living as nature intended she should live, where she has an abundance of fresh air without draught.

I have never had a case of roup but what I found that there was a draught in the hen-house.

Hens in a draught catch cold, and in this respect are exactly like human beings. Draught is deadly to them, and it may also be deadly to you. Sit in a draught a short time, especially if you have been perspiring, and you will quickly begin to sneeze and before you know it you have a cold.

It is the same with a hen. She feels a sense of danger and will often try her best to find another roosting place. You will often notice her roosting in a certain spot, as though she were trying to get away from something. The instinct given to her by nature is more reliable than your supposed knowledge. She is guided by this entirely, and under natural conditions she seldom makes a mistake; but put her in a roosting shed where she cannot get away, and if the place is draughty she will catch cold. Remaining in the same draught, her head begins to swell.

If the draught is not very bad, she will go along for months, but if the draught is as great as it is at some places where I have been an apparently healthy hen will die in a few days. Under such conditions the hen's eyes will be found entirely closed in the morning, and in a few days she will die. I lost several hundred hens at one place with roup, but this place was exceptionally windy.

How can roup-cures cure a hen if she is sleeping in a draught? If you are sleeping in a bad draught what would you do—take medicine or move out of the draught? There is hardly any one who would not move out of the draught if they knew that that was the cause of their trouble.

Medicine is not going to change the draught. It is not going to have any effect on the wind. Supposing that the medicine apparently cures you; it does not cure the draught which was the cause of your trouble, and its effects cannot be permanent because there you are still in the same place in the same draught and are subjecting yourself to a renewal of the same trouble. Don't you think the only sensible thing for you to do is to stop the draught? You would do so if you were sure that the draught was the cause of your trouble.

People do not seem to be sure that draughts are the cause of roup. There are all kinds of roup cures. Their makers keep telling you the same thing, year after year, and you never get at the real facts. You are positive that a draught will give you a cold; so it is with a hen. She catches cold, her head swells, and this keeps on until she dies.

Now, books and poultry papers tell you that a house having three air-tight walls and a roof is draught-proof, and, as an example, it is pointed out that you cannot blow air into a bottle. True, you cannot blow air into a bottle, but you must remember that a poultry house is not shaped like a bottle. Break off the neck of a bottle and you have a larger opening; now blow into it and at the point of contact between the air you are blowing and the air coming out a resistance is met. The air inside the bottle forces the air you are trying to blow into it backward, and at the point of contact there is is a back-draught created. Now, again, if you blow into the bottle at an angle or along the edge, a whirling draught is created, and you must remember that the bottle is absolutely air-tight except at one end.

Is there any argument here? Isn't this a positive fact?

It is, and any one that will make investigations on his own account can prove this to his own satisfaction.

Depend on yourself. You have taken others' advice long enough. Think for yourself, make your own investigations, and you will have a better chance for success.

A poultry house, not being shaped like a bottle but more like it after you have broken off the neck, is just as subject to draughts during a wind as is the broken bottle when you blow into it.

When I first had hens with roup I did not know anything about it. I had several hundred fine pullets suffering from it. I had a large, round brooder house, made out of boards and battens for the sides and shakes for the roof. It was draughty when the wind was blowing. I did not know what to do for the pullets, but I read in a poultry paper that Mary Smith said, "When my chicks get roup I take the oil can from my sewing machine, fill it with coal oil, insert the spout up the nose of the chicken and give it a copious dose. If the chick's head is swelled, I dip the head in coal oil and in a short time my chicks get well." This is the kind of advice I have read in poultry papers, and this is the kind of information you are paying your money for—information which is not only valueless to you, but positively harmful in that, through your not knowing what to do, you try such inhumane treatment on a dumb fowl. Such advice gets you off on the wrong track. It keeps you from ever learning the truth and getting on the right road.

A short time ago some one, writing for a poultry paper and telling how to cure roup by using medicine, got the management of a large poultry farm and very soon had hundreds of cases of roup.

Any one who would take a chick suffering from roup and give it the coal-oil treatment should be compelled to take the first dose himself. How would you like some one to take and duck your head in a can of coal oil when you were

suffering from a cold? Wouldn't such treatment take you back to the Stone Age? If you would have any fighting blood in your body, wouldn't it show itself then? Wouldn't it make you want to do serious bodily injury to that person? Wouldn't every feeling in you cry out against such injustice? Do you think that it would cure your cold? If you are not absolutely sure about it, try it.

Now, the chicken does not like coal oil any better than you do, and its young skin is just as tender as yours. It receives no more benefit from the dose of coal oil than you would. Take my advice here if you do not take it for anything else—never be guilty of such an inhumane act.

Kindness in the treatment of birds and beasts is no more misspent that it is upon humans. Through kindness this world may be made a place worth living in.

Never, under any circumstances, be guilty of an unkind act to your fowls, and you will accomplish more than in any other way. I feel ashamed when I look back at dipping those pullets' heads in coal oil.

After that I bought roup cure—"guaranteed to cure or money refunded." That was what I wanted—something guaranteed to cure. No old woman's methods for me.

"Just put this in the water and the fowls cure themselves." So ran the legend. Consider what work I would be spared. It would not be necessary for me to catch the fowls; I need only put it in the water and my troubles would be over. What a fool I was to go to the trouble of dipping those fowls in coal oil! At last I had the thing. A roup cure guaranteed to cure or money refunded. "Just put it in the water."

Well, I followed directions, put the "cure" in the water. But I had no warm place in which to put the afflicted birds. Most all of them had roup. Did they get well? How could

they get well while they remained in the same draught that was giving them the roup? Not one of them got well.

My large house in the oak grove was now finished, and I put the pullets in it and in a short time there was not a single case of roup among them. They had not a drop of roup-cure after they were put into this house. None of these pullets had very badly swelled heads at any time. Their eyes were swollen a little and they were running at the nose, but none of them were in the last stages of roup; in the new house they were entirely cured.

The brooder house that they had been raised in was absolutely new and no chicks had ever been raised in it previously. The hens did not, therefore, get the roup from an outside source, but developed it among themselves.

Now, what was it that caused them to get well? It was not the coal-oil; it was not the roup-cure; what was it? The house they were put into was in a large oak grove, a quarter of a mile wide by half a mile long. The trees were about 75 feet high and very close together—so close, in fact, that you could scarcely see the sky through them. This house was completely protected from the wind, as these trees formed a perfect windbreak. There were no strong currents of air inside the house, although the air was slowly drifting through it; inside, it was always nice and fresh. While it is true that the yards were damp in the winter time, it was dry inside the house, and after using it I never had a single hen with any kind of disease whatever.

After such an experience, can you blame me if I have no faith in roup cures? Roup is an unnatural condition of hens and, being caused by draught, there is only one thing to do, and that is to remove the cause.

Roup comes from a cold, pure and simple. It is very easily cured in its early stages by placing the birds in a place free

from draught and where they have plenty of fresh air and sunshine.

Draughts are the great trouble. They are the greatest breeders of roup that exist. They are the cause of 99 out of every 100 cases of roup.

The reason that draughts are not suspected as being the cause of roup more than they are is because poultry papers are continually telling the public that a house with three air-tight sides and roof is draught-proof. When you have such a house you think it is draught-proof, and that the roup when it appears is caused from something else. Here you are again in danger of failure from not being on the right track, just as you are when you do not understand the variations in grain. Your whole trouble is that you do not suspect the cause. It is such a small thing that you cannot see it. Here, again, is the importance of little things shown. If it were a big thing, we all could see it, but it often requires a great deal of time and patience to find the draught.

One reason a draught is so hard to find is that it may exist only on windy days or when the wind is coming from a certain direction and strikes the building at a certain angle. Even though there be no opening in the building except the one a few inches in size through which the hens pass in and out, and an opening on the other side for ventilation, or if the house is made of boards and battens, the wind, striking the front opening at a particular angle, will cause a suction which will bring the air down through the ventilator between the cracks of the boards and battens and out of the opening used by the chicks, thus causing a draught.

This experience happened to me not long ago and is described on another page. This is one of the worst kind of draughts, as it is the least suspected, and in that fact lies its danger.

A hen being in a draught and therefore liable to roup may not show it for a few days. When it does appear, the poultryman is at a loss to know how the hen got it. He reads the poultry papers and they tell him that roup is very contagious and he thinks the hen has developed roup owing to the presence of roup germs. He gets out his spray and sprays the place with a disinfectant, and as the wind has gone down the hen begins to get well and he thinks that it was pretty good advice that he read in the poultry papers, since it cured his hen of the roup. If this man happens to use roup-cure at this time, he becomes an advocate of roup-cures. The truth is that the wind ceasing, the draught ceased, and the hen, being no longer in a draught, quickly recovered, just as you often recover quickly from a slight cold. It was not roup-cure, however, nor the spray that made the hen get well; it was freedom from draught.

Pretty soon the wind comes again and with it more roup. Out comes the spray or the roup-cure, and the place is disinfected again. But this time we have more wind; wind means draught, and draught means roup, and instead of the hen getting well she gets worse. The poultryman is now absolutely at sea; he does not know what to think, because he has been on the wrong track; he never learns as long as he stays with the cure, or he thinks that he has to lose a certain number of hens anyway.

One of the queerest things is that every man thinks he has just the right kind of a poultry house, although he may know nothing about draughts or about comforts for the hen. Looking at some of the little sweat-houses one is amazed to think what a hard time the hens in them must have. When one thinks of how one would like to live in one oneself, the prospect appeals about as much as taking the coal oil treatment.

It takes years of practical experience to put up a draught-proof house, just as it takes years of practical experience before you are able to get the best results in feeding.

At the time I had those pullets in the oak grove I bought a pen of fine poultry from a distant State. When they arrived they were suffering from roup. These hens were also placed in the house in the oak grove and in a short time they were well. There was no more roup on the place as long as I remained there. Fresh air, without draught, was too much for the roup; where these conditions prevailed it could not exist.

Roup is so prevalent today that the State Legislature of California has passed a law prohibiting the sale of any fowl afflicted with the disease. Not long ago I was at a market place and inspected 600 pullets six months old that were for sale. At least 500 of them had roup. The owner of these pullets said that they did not have it, but it was just a little cold. He sold them to someone, for three days later I saw that they were gone.

When I moved near San Francisco I bought a large number of hens and put them in the poultry houses that were on the place I rented. In a short time they had roup and canker, although they were entirely free from roup when I bought them. They kept gradually dying off. Some of them had large canker sores in the mouths, some of which looked like pieces of leather.

The hens kept on dying, so one day I turned the whole flock out to roost in the trees. It was summer time and the weather was good. These trees were about 30 feet high and very thick; they were so bushy that the wind did not penetrate them at all. Now, the hens were in the fresh air at all times, and although some of them were coughing very badly when I put them out in a couple of months there was

no more roup on the place. No roup-cures were used here. Once again the roup fell a victim to fresh air and draught-proof conditions.

Moving to still another location, this same flock of hens which had at one time been suffering from roup and canker, and which had entirely recovered by being moved out of a draughty house into the open air, was now placed in colony houses. In a short time they again became afflicted with roup and canker.

It was here that I noticed for the first time that the hens would try to get away from the open window and try to bunch up in one corner of the house. If I closed the window the hens would change their position in the house in a few days, and if the place was tightly closed the hens would be found roosting near the window. I changed the ventilation a great many ways and each change I made caused the hens to shift their position inside the house. They would not do it instantly, but gradually.

It seems that hens have an instinct about draught as they have about feed, and if they are allowed to roost in a place where natural conditions prevail (the same as they are allowed to run out and eat natural foods) they will not get roup; or if they have it and can find roosting quarters that are sheltered from the elements they will quickly recover from the disease in its early stages. This instinct that hens possess in regard to roup has full play when they are living under natural conditions, and this is the reason that hens roosting outside where there is plenty of shelter—as would be the case if they were living in the densely wooded spots that nature intended them to live in—never have roup.

In some localities, where hens are forced to roost out in the open and without the protection that nature provides, it is possible that they may get roup.

The moment you shut up your hens in a building you must provide them with the conditions that nature intended that they should have. If you do not, you are bound to suffer in some way.

You wish to put hens in houses so that they may have shelter. You want to provide them with a proper place to live. You read the poultry papers and they tell you all about building poultry houses, and you build such a house as appeals to you. As to its draught-proof qualities, you think that that is all right because the poultry papers and the poultry books say that such a house had every quality that a good poultry house could possibly have. Yes, they said this and you go ahead and put up your house and the first thing you know you have a flock of rousy hens and you do not know where your trouble comes from. You have placed your hens in a house that at times has a draught in it, and at those times your hens get rousp and the trouble begins which puts so many poultry farms out of business.

When you take a hen that has been running out and getting a natural food and shut her up, you must balance her food properly, because the food she gets in confinement is not the same that she would get in a natural state. If you balance her food correctly, the hen keeps on laying and remains in excellent condition; but if you do not know how to balance her ration, if you do not know of the variations in grain, in fact, if you do not get down to the fine points of feeding, your hen will cease to lay and your trouble begins. The same thing occurs where you put your hens in a building that is not draught proof. The house looks all right, and not knowing that rousp actually comes from draught (being misled by so many conflicting opinions), you will go on for years losing a large number of your flock from rousp, and at the

end of your poultry career you are not one bit wiser than the day you started in.

This is why many are constrained to say after a long time spent in the business, "I don't know any more about the poultry business than when I began 20 years ago." The substance of the whole thing is that you were wasting your time on roup-cures or spraying or some other wrong road, and consequently you never got on the right track. If roup was caused by something obvious which everybody could see, you would have seen it and avoided it; but it is caused from a very small thing, a draught, that exists only at certain times, and the cause being so small you never find it. Anyone can see the big faults, but it requires patience and time to ferret out the little troubles, which, small though they be, lead to the greatest disasters.

Many times I have observed fowls in different houses—how they would change their position when I ventilated the house in a different manner. They were trying to tell me by their actions as plainly as though they had told me in words that they were trying to get out of a draught, but I could not detect it because it was so small. They seemed to know more about it than I, and they did.

Most all manufacturers of roup-cures tell you to separate your roup-y hens from the rest of the flock, which is unquestionably a good idea. You should then, so they say, put the roup-y hens in a dry, warm place, free from any draught, and give them roup-cure. That is exactly what you should do, only leave out the cure. Moreover, you should get the hen at the first sign of roup, as she is then easy to cure. As the disease makes headway, it becomes harder, and when it becomes very bad you may as well kill your hen, because it may take her months to recover and she may then have only one eye left.



*Lattice yard of laying house, showing feeding room, feeder and laying room, wall tipped to
paint back of nests. Also showing runway of the "Press-the-button" system of
selecting laying hens.*

When you separate a rousy hen from the flock and put her in a dry draught-proof place where there is plenty of sun, she will quickly recover. If you have given her roup-cure, you give the cure the credit of curing her, when as a matter of fact it was freedom from draught, together with the sun.

My next experience was in a location that was very well protected by trees. The wind did not reach my poultry house, though it might have done so in the winter with the wind coming from another direction. Here I had several hundred hens and was not troubled at all with roup.

I next established a poultry farm for a man and put up a large fresh-air house 16x100 feet in size. It was seven feet high at the back and nine feet high in front. The front was entirely open and faced toward the east. The valley in which it was located ran north and south.

When the wind blew it swept this house from one end to the other, and at roosting time all the hens would try to roost in the laying room, which was at one end of the building. This room was boarded up all around, so that the wind did not enter it. The hens would try to get in here, and I could hardly keep them out.

This building had three air-tight walls and roof and, according to the poultry papers and poultry books, it should have been draught-proof. The owner, taking all his information from the poultry papers and books, declared that this building was draught-proof, and he showed me books, etc., which would make almost anyone think that such was the case.

Many of the hens were suffering from roup, and he advised me to get a good roup cure. I shut up some of these hens for two weeks in one end of the house and bought a roup cure, which, of course, was advertised as "the best." I tried it, but the hens were no better off than they were before; in

fact, they were worse off than when I began because they were shut up in the draught all day long, whereas formerly they were in it only part of the time. I have never used roup cures since and never expect to again.

When cleaning the dropping-boards of this house every morning, I noticed that sometimes the dust raised would move in directions opposite to that in which the wind was moving outside the building. This phenomenon mystified me, and I could offer no explanation of it. On days when the wind was blowing, this dust from the dropping-boards would move faster than on days when there was no wind, and during hard winds it would move very rapidly. The air current moving the dust formed a draught, which, moving in a direction opposite to the wind might be properly called a back-draught. I watched this closely and became certain that my hens were getting roup from this draught. The question now was how to stop it.

I read in some paper that you should have partitions in your house to stop draught, although in the same paper it had said a short time before that this kind of house could not be draughty. Well, if partitions would stop the draught, I would put them in. I put in partitions every ten feet. This immediately stopped the wind from sweeping it from end to end, but the draught still remained, although it whirled around in a shorter space. A draught whirling around in a short space is as bad as a draught that has a long sweep, so I did not gain anything by putting in the partitions. I could easily observe this short draught by watching the dust from the dropping-boards when cleaning them. As I still found that it moved in a backward direction, I nailed up part of the front of the house and tried to ventilate it through the windows. But I still had a draught. I tried to ventilate it in

every way imaginable, but I never succeeded in stopping the draught.

We were losing so many hens that something had to be done to stop the roup. Thinking that if the house faced toward the south so that the wind would strike it either in the front or the back it might stop the draught, this large house (16x100 feet) was lifted up and turned around, so that it faced in a transverse direction. While the draught was not quite as bad thereafter, it was still in evidence and plainly showed when cleaning the dropping-boards. The hens had the roup just as bad as before. My knowledge of draughts had been greatly increased at this place, although I did not solve the problem.

From a financial point of view this farm was an absolute failure. The hens were suffering greatly from roup and would stand around all day, and I could not do much with them. But I could easily see the cause of my trouble, and I was determined to solve it.

Some people are disposed to be very suspicious of a man who has made a failure. A man who, knowing this, is still willing to come out and tell of his failures—in fact, emphasizes them and does not try to keep them in the background, but tells the truth and explains his failures to you so that you may profit by his mistakes—such a man must have knowledge that will help to lead you to success. The man who is not afraid of your criticisms, who invites your suspicion, your skepticism, who has nothing to fear but everything to gain from such a procedure, should by all means be accorded a careful hearing. You have read enough from the pens of those who have carefully covered up their mistakes. A man who has never made a failure is like one man who never made a mistake. He is the man who never tried and who never accomplished anything worth while.

I next established a poultry farm at another place. This was the most fortunate occurrence of my life, for here the conditions were as bad as they could possibly be. The wind blew ninety-nine days out of a hundred during the summer months, and you can understand what a splendid opportunity this was to study roup. At other places the draughts in the buildings were so small that I had a very hard time finding them, and they existed only on certain days when the wind would be blowing, which as a rule would not be very often. But here I had the wind, day after day, and a hard wind at that. I did not have any little draughts such as I had at other places, but a draught of tremendous proportions, and I had to solve it or quit the poultry business.

I bought about 1,200 hens that, as far as I could see, were entirely free from roup. These were put into a building that had just been built. I was very careful not to buy from any flock in which roup existed, and I refused more than one good flock of hens because there was roup among them. In a short time the hens I put in this new building began to cough. They would try to get out of the draught into one corner, and their eyes began to get watery.

I put in partitions and tried one method of ventilation and then another. If there is any method of ventilation that I have not tried it is because my imagination has its limitations, although I have never yet been at a loss to think of something different. Nothing I did seemed to help the hens. Their heads began to swell, and I lost over 200 of them in a very short time. These hens began to get big canker sores in their mouths, and I had what was positively the worst flock of hens that I ever had in my life. By opening the doors of the partitions inside the building, I would create a draught so great that it would seem that the house was a chimney made for draught instead of a building made for

housing hens. This was the condition when the wind was blowing and the curtains were down in front. This draught could be easily seen by watching the dust and fine feathers as they swept through the doors of the partitions. The strangest part of the draught was that the air currents a few inches inside this building would be moving in the opposite direction from that in which the wind was blowing. The air currents would move in opposite directions, although they were only a few inches apart. Here again was a back-draught.

In order to find out more about back-draught and the different movements of the air currents. I got a lot of small, light feathers, attached them to fine threads and placed them all around in the building. When the wind would be blowing I could see exactly how the air currents would act. I soon found out that the slightest breeze would create a back-draught and that if I opened a large door at one end of the building this back-draught would stop. But I was no better off because I changed the back-draught into a forward draught.

I had cut holes in the roof, holes in the back, and I had the building all patched up. My hens were all dying with roup; nothing I did stopped the draught. But I saw that if I left this place without learning how to stop the draught I would be just as badly off at the next place I went to. I might run into the same conditions, and while they might not be so bad at some other place they might be bad enough.

I had had roup at nearly every place I had been, and if I left here I would probably never again have such an opportunity to study. Here I had the wind every day, and I could therefore make a new experiment every day.

One day I closed the front of the building up as tight as I possibly could and stopped the draught that had defied me

for years. I had plenty of light in the house, as I had ten large skylights in the roof.

Here at last I had a house that was draught-proof, excepting that it was made of boards and battens and a little draught would come in between the cracks. This was shown by the fact that the hens had a little more roup on days when the wind was extremely hard. Otherwise this house was draught-proof, although it was not my perfected roup-proof house. It was just a regular poultry house, made tight. This house is still in existence, and I invite anyone who wishes to learn something about draughts to see it.

The hens began to show improvement by getting over the roup.

Although roup did not bother me very much thereafter, the hens did not do quite so well as those that in a previous instance I had put out in the trees to roost.

I now took the feathered threads and made a great many experiments with them inside the house. I found that the house was draught-proof, excepting on the windiest days. At last, after years of experimenting, I had been able to accomplish something. I had solved the problem of draughts, not by using a new building of a particular type, not by using roup cures, but by getting down to the faults in the construction of buildings and by correcting those faults, providing draught-proof conditions.

Summer coming on, it began to get warm, and on hot days the heat inside the building was stifling; there being no circulation of air inside the building, it was awful, and I could hardly go into it. The heat would have been very bad without any hens in it, but with the added heat thrown off by the bodies of a large number of hens it was terrific. When I would come out of the building I would be perspiring profusely.

Something had to be done to let in the fresh air. I would let down the windows or open the door, but as sure as I would do this I created a draught and in a couple of days it showed its effect on the hens. If any of them were slightly afflicted with roup before I opened the window, I would find that in a few days they would be worse.

I tried in every way to ventilate the house, to let in a little fresh air and to make it fit for a chicken to live in. They would stand around with their wings hanging down, but I could find no way to let in the fresh air without causing either a forward-draught or a back-draught. I soon became so familiar with the air currents that I knew just what kind of a draught every little change in the ventilation would make, and I could easily tell, even though I had not been there that day, if the door of the house had been left open for any length of time, as the roup would show so plainly among the hens that were slightly affected.

While I was trying to provide a cool, shady place for my hens, I chanced to pass one of the lattice houses, of which there were several on this place, which had formerly been a nursery. Inside this house were several of my hens. They were lying in there dusting themselves and otherwise enjoying life. I could not help noticing how comfortable they were, and I thought that it was not only comfortable for the hens but for myself as well.

Here were these hens enjoying life to the limit, while over in the other house the hens were in misery from the heat. How nice it would be if they were all over here! I believe in showing kindness to fowls, and I sat down in that lattice house and began to think. How fine it would be if I only had a place like this for a hen-house! Why not use one of these buildings for my hens? But I could feel air currents inside the lattice house and thought that it might be draughty,

so I went and got my feathers and thread and began to experiment.

I soon found that this house was draughty in a heavy wind. I made countless experiments, and at last I fixed up part of one of these houses so that it would be like the other house I was using; that is, it would have a roof and three air-tight sides and a lattice work extending far out in the front. This would provide not only a cool place for the hens in warm weather, but it would break the wind. If it would break the wind there would be no wind striking the front of the building, and there could be no draught inside. Not only this, but the hens would be in the fresh air all the time and there would be no draught.

Here, in fact, I would have practically outside conditions and at the same time there would be inside protection. That was just what I wanted, for had not the pullets that I had with the roup years ago got well when I put them in the house out in the oak grove? At a later time when my hens were afflicted with roup and canker they also got well when I turned them out to roost in the trees. I now brought my feathers and threads into play again and conducted countless experiments to find out if the house was draughty. It proved not to be, and I brought over some of the hens that were suffering slightly from the roup—that is, their heads were not swollen like some of the others. These hens soon got well and I experimented on a great many hens in the same way and they all recovered in a short time.

It stands to reason that the moment you provide your hens with plenty of fresh air in a place that is not draughty they are not going to get sick because you are providing them with conditions that nature intended them to have, and nature knows more about it than all the rest of us put together.

I thought so well of this house that I began to work on it. It represented the result of my fifteen years' fight with roup. I applied for a patent on it after I got it perfected.

Those hens that were suffering very badly from roup I kept in another building. I kept them there for several months, and while most of them recovered there were only a few of them that had more than one eye left. When I left this place some of these hens still had the roup very badly, and that is why I say that it is not worth while bothering about hens after they become very badly affected with roup. It is better to spend your time in preventing, not trying to cure, roup.

You will always find that the changes in ventilation that are beneficial to roup prove to be just as much so to canker, for canker is only another form of roup and should receive the same treatment. While I have had roup without canker, I have never had canker without roup.

If you attempt to put hens suffering from roup out in trees to roost in bad weather, the change would not only be harmful to them, but the exposure would probably kill many of them, just as it would kill you if you were suffering from pneumonia and were forced to live out-of-doors in bad weather.

At this same place I had a brooder house 18x50 feet in size and seven feet from the floor to the roof. In this house tongue-and-groove lumber was used. This brooder house was divided in the center, so that I had two rooms 18x25 feet in size. Each room was ventilated by four airshafts placed on the outside. These were about five feet in length and extended down to within two feet of the ground. Each shaft was provided with a slide to regulate the amount of air. The shafts were in the corners of each room. In the center of the roof was a ventilator, one foot square, extending

about two feet over the top of the roof. This ventilator had a slide to regulate the escape of the air. The idea is to bring the fresh air into the room from each corner and drive the used air out through the ventilator. This looked like the best system of ventilation I had ever seen, and one brooder company sent out this plan with their stoves.

This house worked very well except under certain conditions. For example, 1,200 young chicks were placed in this room and in a couple of weeks they began to die off very rapidly with roup. In a couple of days their heads swelled up, both eyes closed, a watery fluid ran out of their eyes, and in a few days they died. Since these chicks got the roup and got it badly there must be a bad draught somewhere; I could not be fooled any longer about the causes of roup.

But where could the draught be? I investigated for several days and I could find no draught of any kind. I then got my feathers and threads and hung them up all around in the house for several days. They proved to me that there was no draught.

No draught and my chicks dying with roup; how could this be? Before I put these chicks in I had taken out of this room 1,000 other chicks, three weeks old, without a single case of roup among them. Here was a condition that was hard to explain, but working on the theory that roup comes from draught I watched the feathered threads and one day in a wind I saw them pointing toward the hole through which the chicks ran in and out of the house. This hole was about 4x6 inches in size, and going over to this outlet I found a very bad draught. The wind striking this hole at a particular angle created a suction, and instead of the air inside the building going out through the ventilator it would come down through the ventilator and through the air shafts

and out through the inlet that the chicks used, thus creating a very bad draught.

I now saw why the chicks had the roup. But if the chicks had the roup, why had not the other chicks that were in the same room a short time before gotten it?

To get at the answer to this question was a puzzle, but I remembered that the trade winds which blow only in certain months of the year had just begun, and they had not been blowing during the time the first chicks were in the house. Consequently there was no draught in this house when the first lot of chicks was in it, but by the time the second lot was put in the wind had begun. With the wind came the draught, and with the draught came the roup.

I regarded this as one of the best experiences I had ever had, because I was a long time in finding the trouble, and if I had not been positive that draught was the cause of roup and stuck to that believe I never should have found the real cause.

In my roup-proof house the wind is broken 24 feet up in front of the roosting hens and 16 feet in front of the house proper. The roof of the lattice yard and part of sides of the lattice yard, which allowed the air to circulate freely, prevented the air from forming a pressure which would resist the incoming air and forcing it back, creating a back-draught, because the air inside the lattice yard would move freely in every direction exactly like the outside air.

This is the secret of abundant ventilation without draught. The pure, fresh air is thus allowed to drift slowly around the hens, absolutely without draught of any kind, as the lattice breaking up the wind prevents it from sweeping forward and creating a forward-draught.

Abundant ventilation without draught is identical with nature's outside conditions, in which roup is seldom known.

These conditions I have practically created in my poultry system, but I have excelled nature in that I have provided inside protection from all changing weather conditions.

ELECTRICITY

By the introduction of electricity into the poultry business, the poultryman will have a far easier time of it than he has ever had in the past. By using electric incubators and electric brooders, also by cleaning your houses by electricity, much of the hard work attached to the business will disappear. When you use electricity you are not worrying about your place burning up, and everything is easier and better.

You begin to think that the poultry business is not such a bad business after all, that you are well repaid for the time and trouble you took to learn it, but be sure you learn it right. When you get up in the morning you have not, provided you use electricity, a hard, dirty job staring you in the face, for, by pressing a button or by turning a crank, your house is instantly cleaned, and when you see how easily this is done you wonder how much of your life you have wasted cleaning dropping-boards and how much money you have lost in time wasted.

THE AUTOMATIC FEEDER

One day in watching my hens at the hopper, I observed that some of the hens would stay around the hopper and not let some of the others eat, especially those that were more timid than the others. There seemed to be boss-hens the same as there are boss-roosters in every flock. These boss-hens were the ones that were in the best condition, while the timid hens were as a rule the ones that were out of condi-

tion or moulting. I found that they did not get enough to eat and that they were consequently a very long time in moulting and coming into condition.

Here I believe there is a heavy loss and one that has no reason to exist and should be prevented. Every little loss should be prevented, and if a hen is kept back in the moult she is just that much less profitable.

Hens when moulting should have all the food they can eat, just as at any other period. Never starve your hens, for it does no one any good to starve. It takes food to produce eggs and feathers, and the moulting hen should have lots of food.

After years of careful watching and experimenting with different devices, I perfected an automatic feeder which provides a separate stall for each hen to feed from. The boss-hen cannot bother the others, and the results obtained show very plainly in the moulting hens because they obtain the amount of food they should have. It also shows an increase in the egg yield, as it guarantees to every hen that she can obtain all the food she requires whenever she wants it.

SELECTING THE LAYERS

Book after book has been written, telling you how to select the laying hen from the non-laying hen, and they are about on a par with the books telling you that you can make from \$4.00 to \$10.00 a year per hen. They are only published to get your money, and after you read the book you feel that you have been swindled again.

In my poultry system there is more than one wire partition in the building, and in separating the hens after they have all passed through to the other end of the building, the non-layers are confined between two partitions. The layers

are then "selected" over again on their returning to the end of the house where they had first been. Such non-layers as may have passed through the first time with the layers are now by themselves, and they are put in between the partitions with the other non-layers. Thus in a short time you have your non-layers separated from your layers without having to handle them and without any bother whatsoever. Moreover, all guess-work is eliminated. By placing a few trap-nests with the non-layers, they can be caught when they begin to lay and be returned to the flock. The other hens can be Hoganized and disposed of if worthless.

In feeding hens I have noticed that in the same pen and on the same feed there would be some hens laying and some that would not be laying, although they seemed to be otherwise in good condition. This led to repeated experiments with the hens that were not laying. I found that by changing the food on the non-layers that they could be made to lay, but when I would leave the non-layers with the layers and change the food—especially in the fall or early spring—the result would sometimes be disastrous to the layers, causing them to moult. If, however, they were separated and the food was then changed, the non-laying hens could be made to lay.

I regarded this as a matter of the greatest importance in increasing profits. This feature of the business, if properly handled, may turn many a poultry farm from a failure into a success.

I bought books on different poultry systems which told how to select the laying hens, and began to experiment. But the books I bought, with the exception of Hogan's "The Call of the Hen," were worthless and I never received any value from them. In making these experiments, however, I discovered the "Press-the-button system" of selecting laying hens, which I believe to be the only practical way of

selecting layers. I believe, also, that when it becomes understood it will be universally used.

Although book after book has been written telling you how to select layers, I have solved the difficulty in such a simple way that I shall give it only short notice here. Do not, however, underestimate its value on that account, because it is one of the most valuable discoveries that has ever been made in the poultry business.

If this discovery is used intelligently, with proper feeding, it will quickly increase your profits. But I wish to say that this system of selection can be made valueless by a wrong system of feeding which will cause your hens to set in large numbers. The fault you will find is not in the system of selection, but in your system of feeding.

First select your non-laying hens, then by changing the feed bring them into a laying condition. You can then return them to the flock. If you are feeding the layers a light feed give the non-layers a heavier ration. The experimenting that you are doing will here be very valuable to you, so do not be afraid to experiment.

DRY MASH

I use the dry mash system in feeding exclusively, although about 90% of the poultrymen in California feed wet mash. I feed the dry mash and keep it before the hens at all times if their digestion is good. At about 8 A. M. I feed 100 hens 2½ quarts of grain and then about nightfall I feed them 2½ quarts more. It is scattered around evenly, so that all hens have an equal chance, and it is thrown on top of litter so that the hens can scratch. If the litter is light, some of the food will be hidden and the hens will scratch after it.

In feeding corn it should be coarsely cracked at first until the hens learn to eat it; if it is fed whole some of the hens

will run along with you and eat it as fast as you can throw it down and the other hens will not get their proper share. If you crack the corn, the hens will not follow you along but will stop and eat it with the rest, and they will all stand a chance of getting their share.

Be very careful of variety. "Variety is the spice of life," but it is very hard to balance the simplest rations and a few kinds of grain without getting variety of mixture. A variety of foods simply means a variety of troubles.

Keep grit before your hens at all times—granulated bone, charcoal and shells. Always have the water before the hens fresh and clean. When in a place where the water is bad, I boil the water that I give to the baby chicks for the first few days. The precise effect which the water at different locations has upon poultry and upon feed cannot be determined. There is a great difference in the effects it has on human beings. I am of the opinion that it also affects the hen and necessitates her having a slightly different ration.

IMPORTANCE OF SANITARY METHODS

Sanitary methods should be employed. Dropping-boards should be cleaned every day if diseases such as chicken-pox are to be avoided. Hens in a natural state show that they know the value of sanitary methods by roosting in trees and by selecting a high roost where they do not have to breathe the fumes from the droppings. Droppings left on the dropping-boards day after day, create the finest breeding place for diseases that is known. How hens can remain healthy roosting a foot or two above a place filled with droppings, which have been accumulating for weeks and from which noxious fumes arise, is a mystery. The result is often shown by the fowls becoming diseased.



General view of the Baywood Poultry and Pigeon Farm.

THE THREE GREATEST PROBLEMS FOR THE POULTRYMAN

While the feeding and housing of poultry are problems, as is the roup also, there are three other great problems which the poultrymen have to solve before the poultry business can become the safe investment that it should be for the poor man, and which he is led to believe it is. Unless the poultrymen solve these problems, there is always that danger of failure which every poultryman has to face. If he continues to allow conditions to exist which permit others, through their being able to control the price of eggs, to reduce the price of eggs in the spring—at which time it actually costs more to produce them than they will bring—he cannot hope to succeed. He must solve these problems and these conditions must be changed, in order that there shall be the same security from failure in the poultry business that there is in other businesses.

These three great problems are:

First.—To devise a better method of distributing eggs and poultry.

Second.—To reform the poultry-feed business.

Third.—To control the market and cold storage plants.

The distribution and buying of the poultrymen is so unbusinesslike that if the evidence of their out-of-date methods were not to be seen on every hand it would be impossible to make anyone with the slightest business training believe that a business in which there are many bright men engaged could ever continue to use such methods. No greater folly than the retaining of these crude methods, which result in the failure of 95% of those who engage in the poultry business, can be conceived. If there exists a poorer method of doing business than one which causes the failure of 95% of those who engage in it and threatens the other 5% with failure at all times, it would be hard to say what it is.

Taking up the first problems—that of distributing eggs and poultry: One poultryman ships to one middleman and his neighbor ships to another. How much better would it be if everyone shipped to one central house which supplied the trade.

The unbusinesslike method of distributing eggs is closely seconded by the unbusinesslike methods employed in buying poultry feeds. In a small city where I was recently there were ten or more large dealers in poultry feeds. These places were situated within a few blocks of one another. Each firm had a large amount of capital invested in land; each had its large warehouses, its machinery for grinding grains, etc.; each employed experts to handle the feeds; each firm did considerable unnecessary advertising and some employed unnecessary solicitors and traveling agents to obtain trade. Now one large dealer could supply this district as well as the ten men engaged in doing so, and by dispensing with nine buildings, land, etc., and the surplus stock of food kept on hand, a great saving could be effected. The concentrating of this business under one head would result in the economy that goes with the best business methods.

The third problem—that of controlling the cold storage plants—is, if anything, greater than the other two. When your hens are laying an abundance of eggs in the spring there are too many eggs produced for the market, eggs begin to accumulate rapidly, and as the supply is greater than the demand prices drop rapidly. If the market is not relieved, the price will go down to a point at which it costs more to produce eggs than you can get for them. If the poultrymen were properly organized and controlled the cold storage business, they could, when the prices of eggs reached a certain low point, put the eggs in cold storage and prevent the price from going any lower. They continue, however,

to run their business on the old competitive system and do nothing at all to help keep up the price of eggs, so that they may pay a profit. They leave this most important of all problems to outsiders whose interests are exactly opposite to theirs. If these outside interests did not step in and relieve the market, the poultrymen would not only, at times, be unable to sell their eggs, but would not be able to give them away.

In the spring of 1913 eggs were quoted at 16c per dozen, yet a few months later these same eggs were selling for 40c. per dozen. They had been kept in good condition at the cost of a few cents. When the market becomes overloaded with eggs and the price goes down to practically nothing, outside interests, knowing the profit to be made by keeping those eggs a few months, step in and relieve the market of the surplus eggs, which has a tendency to hold up the market. The unorganized methods of the poultrymen and the organized methods of the cold storage companies enable the outside interests to control the price of eggs to a great extent. Instead of the poultrymen coöperating and managing their own business so that they could control the price of eggs, they do just the opposite; they do not coöperate, but employ the inferior and out-of-date methods of competition and allow these outside interests to regulate the price of their product. As outside interests are in the cold storage business for one reason only and that reason is profit, it is beyond reason of any sane person to expect them to pay 20c per dozen for eggs when they can get them for 15c per dozen by waiting a few days until the market becomes overstocked.

The outside interests through the daily press shout that there is an over-production of eggs and by not relieving the market the price of eggs falls rapidly. There is undoubtedly an over-production of eggs every spring, yet those eggs

sell for nearly three times that price in the fall and the interests who produce nothing are making large sums, while 95% of the poultrymen fail. The interests, working between the producer and the consumer, squeeze the last cent out of both, and the greatest of all wonders is how the 5% manage to make any money at all with such obsolete methods of doing business.

The poultrymen using competitive methods must sell their eggs to the highest bidder and the bidders using coöperative methods are not going to outbid one another for the sole reason of helping the producer. As you do not provide any way for relieving the market when it becomes over-supplied, the outside interests step in and take care of the surplus. The cheaper they can buy the eggs and the higher they can sell them for, the more profit they make. By their superior methods of coöperation they make millions, every cent of which is taken from the producer and consumer. The poultrymen, on the other hand, by their unorganized methods are losing millions.

This is the first poultry book that has ever mentioned these problems.

I decline to fill this book with such things as what some old woman did for a rousy hen when there are conditions existing that cause the failure of 95% of the people who engage in the poultry business. I want to get down to the real facts, the real cause of these failures, and I find that the greatest cause for failures is the poor business methods the poultrymen are using. I wish to point the way for them to overcome such injurious conditions. Why should anyone pay you 20c for a dozen of eggs when they are to be had for 15c? Would you do such a thing? Does not the coöperative method that the large interests employ and the

millions they make prove beyond the shadow of a doubt the superior methods of coöperation over unorganized methods?

You do not see the Standard Oil Company allowing the price of oil to fall below what it costs to produce it or the Steel Trust or the Tobacco Trust or the Bread Trust or any trust allowing prices to fall to a point at which it costs more to produce the commodities than they will sell for. This is all done by coöperation and organization.

You do not see the cold storage interests handling your eggs at a loss. But when the price of eggs falls to a point at which they cannot be marketed at a profit, although this condition is due to your lack of coöperation and organization, you denounce the trusts and demand that they be destroyed. If this were a comedy instead of the tragedy which it really is, you would be the laughing-stock of every grammar-school child.

When we stop to consider the wonderful undertaking accomplished by the government at Panama through coöperation and organized efforts, the solving of these three little problems of the poultrymen would seem very simple; so simple, in fact, that it seems a mystery why proper methods are not immediately adopted. By the failure of the poultrymen to adopt these measures, millions of dollars that would otherwise go directly to them and to the consumer are going to those who produce absolutely nothing, but who, by handling the poultryman's goods for him, take most of the profits for themselves. They are enabled to do this through their coöperation and organization. If the poultrymen should coöperate and organize and employ the better business methods of coöperation, they would keep for themselves the profits that are now going to others. The millions that would go to them as producers would be lost to those who now handle their goods.

The outside interests, through their coöperation and organization, try to keep this profitable business. Through their control of certain newspapers that go to your home and which you read and which influence your mind, and in various other ways, they contrive to keep you in ignorance of the value of coöperation and organization, you persist in your out-of-date methods of competition, and the outside interests continue to profit.

The complete and final solving of these three simple problems lies in state or government ownership, in the establishment of a state Produce Exchange, State Feed Depots, and State Cold Storage Plants. Therein would lie the final solution of these problems. And all other methods are mere by-paths.

Under State ownership a central distributing house should be established in each district. To these central houses every poultryman might ship his eggs and they would be distributed for him at the actual cost of handling. The profit which he now pays to the middleman would thus go into his own pocket.

Under State management, if the market in one place should become overstocked, the eggs could be sent to some place where the demand was greater. As there would be distributing points only where they were actually needed, an immense amount of money would be saved and would go directly to the producer and the consumer.

Under State ownership and management of feed depots, poultrymen would be able to obtain their poultry feeds at cost, plus the cost of handling. They could buy a few sacks and get them at carload rates. There would be only one feed depot to support in each district instead of ten or more, as is the case at the present time. The poultrymen may adopt

other ways, but they are only by-paths and can never help them as State ownership will.

Under State ownership of cold storage plants, the poultrymen would be able through coöperation to control the price of eggs. They would no longer have to deal with outside interests which make millions by buying their eggs at the lowest possible price in the spring and which, through their ownership of the cold storage plants, are able to control the price of eggs.

Under State ownership of the cold storage plants that powerful influence which is used to control the price of eggs below the cost of production would be instantly removed.

Under State ownership, when the price of eggs reached a certain low figure in the spring, you could place your eggs in the State cold-storage plants, receiving from the State the price that eggs were actually selling for at that time, and in the fall when the eggs were sold at an advance in price you would receive that price for them, less the amount that was advanced to you in the spring and the cost of handling. By this method you would always be sure that you could produce your eggs at a profit.

When State ownership is established the 95% of failures in the poultry business will be stopped, but they will never be stopped until then.

As the feed problem is today the feed dealers, the merchants, and the mills are organized. The mills refuse to sell to you directly except in a very few places. Time after time I could have made a success had I been able to get a reasonable price for my eggs and buy my feed at a reasonable figure; but in many places (there are a few exceptions) where I have been I have had to pay from 30c to 50c on the \$1.00 above quotations for my poultry feeds. Moreover, I was charged for the best grades, while I generally received the poorest grades.

A short time ago I was talking to a dealer in poultry feeds who was formerly a poultryman himself and who manufactures a good poultry food at a price as low as possible under existing conditions. He told me that a few days before on coming into his store he had seen among his customers an old man and woman standing at the window. They were trembling visibly, and under repeated questioning the old man broke down and said he did not have a cent left in the world and did not know how he could get any more food for his poultry or for himself and wife. The price of eggs was so low and feed so high that eggs could not be produced at a profit and he was ruined financially. He was without a friend and threatened with the loss of his home. The dealer, a large-hearted man, said to me, "Conboie, I pitied him. The tears came to my eyes as I beheld that pitiful old man, utterly ruined through his failure to coöperate with his fellow poultrymen."

This dealer, knowing the out-of-date methods that the poultrymen are using, understanding the inside of the poultry business, and knowing that I was writing a book on the poultry business, added, "Go to it, Conboie, write a book and tell the truth. Help to change the conditions for poultrymen who work three hundred and sixty-five days every year and 95% of whom fail because of these conditions."

In some localities the poultrymen coöperate and buy their foods. In Petaluma many of them coöperate and through Lloyd's establishment obtain their grains at a reduction. Mr. Lloyd has been a great help to the poultrymen in this vicinity; so great, in fact, that the interests are fighting him in every way imaginable. Every possible means is used to prevent him from obtaining foods, etc. The manufacturers of beef-scrap, fish-scrap, and all kinds of poultry foods, and the large flour mills in this State refuse to sell to him. There

is a law which compels them to sell, but there is no law to regulate price. Mr. Lloyd has been cutting into the trade of other feed dealers and this has hurt business. The merchants, using coöperative methods, have warned the mills that if they sell to Lloyd they will boycott their flour and other products all over the State. Under this threat the mills refuse to sell to Lloyd for fear of being put out of business themselves. These are the conditions that exist in California today. At this writing Mr. Lloyd is trying to get the poultrymen to coöperate and form a large stock company. If this plan is successful, mills will be installed to grind and mix the food, but Mr. Lloyd is being fought with such determination by "big business" through a lack of coöperation by the poultrymen whom he is helping.

Some of the biggest interests in America are interested in the cold storage problem, and as they are in it for profit only they buy eggs as cheap as possible in the spring and sell as high as possible in the fall. Last year when hens were laying an abundance of eggs, the price was so low that they were produced at a loss. These were the actual conditions existing last spring, and in the face of these facts can you ask if there is money in the poultry business under such conditions. What do you think of the poultry books which are being read by old people and which lead them to believe that they can make from \$4.00 to \$6.00 a year per hen?

This book and my poultry system would probably sell far better were I to lead you to believe that you could get rich quickly by using my system. This is probably the first book ever published advising people not to go into a business when the author of the book has for sale what he believes to be the best appliances and methods in the world for use in that business. It takes all kinds of people, however, to make a world, and I am the one who says, "Down with poultry

books! Down with poultry systems! Let us have the truth!"]

The American public loves to be swindled, and many will not like this book because it does not fill your mind up with air-bubbles that are bound to burst. But it may keep that money of yours in the bank to be used in your day of need.

X Don't you think it is about time that the poultry papers stopped publishing what Mary Smith did to straighten the toe of her pet hen and all such rubbish and get down to the real business of helping you? After reading this book are you still going to be interested in columns of rubbish by people who, with backyard poultry experience, write for the poultry papers? Or are you going to demand that the papers wake up and help you solve problems that are of the greatest importance to you and on which your very existence depends?

X/ Don't you think it is about time they threw off the yoke? You are wasting your time reading backyard poultry articles. Demand articles that vitally concern your success.

In 1913 a large number of poultrymen reduced the size of their flock on account of the low price of eggs and poultry farms without number were abandoned because they were producing eggs at a loss, and this in the best part of the laying season. What disappointments there must have been for those people who had the "little home" idea!

The big interests, learning long ago that competition was a very wasteful method of doing business, began to coöperate and in every business where they have coöperated improvement was shown. They have coöperated in the cold storage business and you do not see them bidding against one another for your eggs. In business competition means extinction, coöperation means life. By forcing high prices in the fall and low prices in the spring, the interests have the producer and consumer at their mercy and, as everyone knows, "big business" is heartless.

But do not these things hold good also in "little business?" I was once managing a large poultry farm and was unable to sell my eggs in the town where I was located because the retail stores had made contracts with the cold storage interests to take their eggs at a certain contracted price. The retail stores were selling these eggs to their customers for as high as 60c per dozen. One store did buy two cases from me, on which my name was plainly marked and they put two or three of my fresh eggs in with the cold storage eggs and claimed that the whole lot were my fresh eggs. They kept these cases in front where everyone could see them and sold eggs from those two cases for over two months.

The interests see the value of coöperation, but the tragedy of it all is you do not. You travel along under the disadvantage of competition with out-of-date methods, methods condemned and discarded years ago by "big business," methods so crude, so unbusinesslike that you are the easiest kind of "game" for men who employ the business methods of coöperation. You still cling to business methods of the past century and until you wake up and learn the value of coöperation you cannot expect to be any better off than you are today.

If you will not help yourself, who will help you? The daily papers tell you the low prices of eggs is due to the overproduction which occurs every spring and that you must expect the low price. But as "big business" interests are not strangers with the daily press, you are only listening to the voice of "big business" singing, in the greatest coöperative act known, a song entitled "If the Poultrymen Want Us To Do Him We Will."

In the California Legislature during the session of 1913 a bill was introduced to establish a State Produce Exchange where the poultrymen and other producers of food stuffs would all ship to one central house, which would handle the

commodities at actual cost. This State Produce Exchange would be owned and managed by the State, and its proposal offered the correct solution of our problem. It was admitted on all sides that this was the correct solution, just as it is admitted that the State Feed Depots and the State Cold Storage Plants offer the correct solution for other problems. But this meant the taking of millions of dollars from the middleman and giving it to the producers, and to this the middlemen objected. By coöperation they used their influence with their lawmakers (not yours) whom you elected, and although this bill passed the Assembly it was strangled by the committee to which it was referred.

Here is shown the important part which politics plays in your struggle for daily bread, and when I say that politics is the most important thing in this world today I do not exaggerate a particle. "Big business" long ago knew the value of politics, as the shameful conditions that exist in State and National government have shown. You will never improve your condition very much unless you get State ownership and management of a State Produce Exchange, a State Feed Depot, and a State Cold Storage Plant, and the only way you can get these things is by coöperating and organizing and using the ballot to accomplish these things for you. Forget your petty differences, forget your little prejudices, if for no other reason than that it is good business policy. Do as the interests do, and by studying politics, by learning to think for yourself, and by coöperating with your neighbor you can abolish disease, poverty, prostitution, misery and untold suffering. Through politics, and in no other way, you can obtain a State Produce Exchange, a State Feed Depot, and State Cold Storage Plants. Coöperate with your neighbor so that he can live, so that his children can live,

so that your children can live, so that you can live, so that we all can live, and live like human beings should live.

To those who think the State government could not successfully own and manage these State stores may I point to the work of the government at Panama. At Panama the government showed the world how it could handle the biggest kind of an undertaking. It showed the world how it could own and manage successfully a line of steamships, a railroad, a cold storage plant, an electric light plant, a number of stores, and even a laundry. During the building of the canal the government owned and managed its stores and put in charge of everything a man who was big enough to ignore any trust. Everything was bought in markets all over the world and sold directly to the consumer. There were no trusts' profits, no middlemen's profits, included in prices of things bought at any of the eighteen stores in the canal zone. The amount of business done amounted to over six millions of dollars a year, and everything was sold at prices less than it could be bought for in the United States. Besides this the government furnished land free of rent and miscellaneous things to the workers; it made a healthy place of the fever-stricken district and accomplished the biggest task ever undertaken by man.

In the face of these facts, does it not seem foolish for anyone to say that the government could not run a few small stores? If it has done all these things successfully at Panama, why do you not insist that the government do at least a few things of a similar kind for you at home?

Government ownership would stop 95% of the failures in the poultry business; it would stop wrecking thousands of homes, stop ruining thousands of lives, and stop untold suffering and misery. Only when government ownership is estab-

lished should books be written enticing people into the poultry business.

Now, in order to get these State stores, you must interest yourself in politics. Search out "big business" in its lair and destroy it with that weapon of every American—the ballot.

"GO ONWARD, GO FORWARD TO VICTORY. THERE CAN BE NO SURRENDER TO WRONG." It is your victory for the asking, but you must come out of the ignorance of ages. If you have any fighting blood left in your body it must show itself. Your weapon is the ballot and you must be skilled in its use. If you use the same method—coöperation—that the interests are using, they are powerless before your superior numbers; but if you continue to fight without coöperating with your fellow poultrymen your superior numbers are powerless before their better-organized forces. Herein lies the cause of the 95% of failures in the poultry business—lack of **co-operation at the ballot box**. If you ever get anything worth having you have got to wake up and work for it. Organize, and think! If you imagine you will ever get it by remaining apathetic, you are dreaming a wilder dream than my wild poultry dream.

V. CONCLUDING REMARKS

If I have taken pains to show you the other side of the poultry business, I do not want you to think that there is no money in it under any circumstances. What I want you to know is that you must understand it and understand it thoroughly, or you can make nothing at it. If you do understand the business, you do not need me to tell you what to do. You may know more about it than I do.

Those people who understand the poultry business sometimes make money at it in spite of the handicap of present conditions, but their number is small. Most of these people started in on a small scale and now they have a large business, about the success of which there is no question. In a certain locality you can ride for miles and miles and see nothing but white chickens—farm after farm with nothing but chickens. The proprietors have no other way of making a living and they make it from hens.

To me the future of the poultry business appears very bright. Large ranches are rapidly being cut up into small farms, the people are rapidly waking up and will no longer allow unjust conditions to exist. Meat is gradually getting scarcer, poultry will have to supply the deficiency with eggs and chickens. With a more equable method of distribution rapidly approaching, the poultry business offers a field of enormous proportions for the investment of capital and holds out inducements to intelligent young men who will study the business, make of it a science, and by using up-to-date and businesslike methods put it on an equality with other

enterprises. Thus the poultry business will cease to be considered a joke from a financial point of view. The watchword will not be "work hard" but "hard thought."

The author of this book has put aside indirection. He has burned his bridges behind him. He cannot go backwards and must therefore go forward. No manufacturers of poultry nostrums, no poultry book or poultry paper, no real estate agent, no feed dealer, no middleman, and no paper of the daily press influenced by "big business" will have one word of praise for this book, or for my poultry system, but on the contrary will use every possible influence against them. You will not see my name in the papers, and whether my book and my system ever succeed depends on you. No one else but you is going to help me.

If you like this book, get your neighbor to buy it and by doing so help its author and hasten the day for justice to triumph. If you do not like this book, tell your neighbor about it and prevent him from spending his money because he may need it more than I do. You will be doing him a good turn, and I believe you owe it to humanity to help him.

In closing I will say that, to me, there is something more valuable than selling real estate, more important than writing for poultry papers or writing poultry books, more important than selling poultry systems and chicken houses, and that is the welfare of the human race.

It is more important that we provide houses for human beings to live in, that we provide conditions under which every one can own his own home. It is more important to feed the human baby than to feed the baby chick. That is the all-important thing on which we should unite—the weak and the strong, the poor and the rich—to establish on this earth a system of industrial and social justice for all men, women, and children regardless of race, color or creed. By

doing so we will not only profit by this kindness, but everything will profit by it—even the baby chick.

This, to me, seems to be the most important thing in the world. Let us substitute for this cruel, heartless system of hatred, injustice and greed, of which we are all victims, a system founded on justice and kindness and good-will to all human beings. We are often forced to put our real selves in the background, and we learn to practice injustice instead of justice, unkindness instead of kindness, and dishonesty instead of honesty, on account of this struggle for existence, this struggle for bread. Deep down in the heart of you and me is the eternal calling for justice, honesty, kindness and love, and the touch of true kindness brings that which is our better selves forward as nothing else can.

We are now in the midst of the most wonderful revolution this world has ever seen, a revolution to establish justice and kindness. I see in the distance justice rapidly replacing injustice, honesty displacing dishonesty, kindness forever replacing unkindness, and greed and hatred replaced by love. I do not see streets paved with gold, but I see something far more valuable, I see a just social and industrial system, turning hearts of sadness into hearts of gladness and overflowing with justice, honesty, kindness, and love.

Yours for coöperation,

CONBOIE.

I sold you this book representing it as being the truth. If you do not believe it, if for any reason you are not satisfied with it, if you think I have misrepresented anything, or if you are so poor that expending of the price you paid for it will work

a hardship upon you, return it in good condition within ten days after receiving it from me and I shall gladly refund your money to you. I have written what I know to be true, and if this book does not come up to your expectations, if you are not entirely satisfied and do not want my book, then I am not satisfied with your money and do not want it.

P. Bink.

